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EXPLANATORY NOTES

covering

ESTIMATES OF APPROPRIATIONS

for the

DEPARTMENT OF AGRICULTURE

for the

FISCAL YEAR ENDING JUNE 30, 1925.

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U.S. GOVERNMENT
PRINTING OFFICE



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OFFICE OF THE SECRETARY.

Statutory Salaries. Apparent increase, \$102,269; actual decrease, \$20,110, as follows:

(a) Increase of \$122,379, as follows:

- (1) \$24,023 under Classification Act;
- (2) \$63,336 to provide for increase of compensation (\$240 bonus), and
- (3) \$35,020 to provide positions for twenty-one employees with base salaries aggregating \$29,930 and increase of compensation (\$240 bonus) amounting to \$5,040 transferred from the statutory rolls of the Extension Service, Office of Editorial and Distribution Work, Office of Experiment Stations, and Bureau of Home Economics, which are reduced accordingly.

(b) Actual decrease of \$20,110.

Mechanical Shops and Power Plant. Apparent increase \$13,000; actual decrease \$6,860, as follows:

(a) Increase of \$19,860 as follows:

- (1) \$1,550 under Classification Act.
- (2) \$18,310 to provide for increase of Compensation (\$240 bonus).

(b) Actual decrease of \$6,860.

Rent of Buildings in the District of Columbia. Increase of \$30,000, as follows: (a) \$20,000 for cotton and hay warehouse building, Bureau of Agricultural Economics. It is urgently necessary that provision be made for the rental of a new warehouse-type of building to permit centralization of the cotton and hay work of the Bureau of Agricultural Economics. The building should provide facilities for storage, laboratory purposes, and office work. A large quantity of cotton and hay is constantly needed, there being on hand at one

time approximately 1,150 bales of cotton and 300 bales of hay. A considerable part of the cotton is now stored in the basements of buildings used for office purposes in Washington and in nonfireproof warehouses in Washington and Alexandria, Va. The hay is stored in a nonfireproof warehouse in Washington. A fire in a cotton warehouse in Alexandria entailed a loss of \$12,000. Constant travel to Alexandria incident to handling the work at that point involves a serious loss of time, money, and efficiency. One of the most serious aspects of the present conditions is the fire risk from the considerable amounts of cotton necessarily kept on the top floor of the Bieber Building, 1358 B Street, S. W., for use in preparing cotton standards. This building is eight stories high, and, except on the eighth floor, is exclusively occupied by administrative and clerical forces, including the Department Library.

The estimated saving that may be expected from the centralization of cotton and hay work in the proposed new warehouse is \$9,130, as follows:

Salaries of 4 laborers.	\$3,120
Carfare	250
Trucking expenses	475
Warehouse for new alfalfa standardization work (annual rental).	1,200
Necessary laborer for alfalfa warehouse	525
Rentals of present warehouses:	
Union & King Sts., Alexandria (cotton)	2,180
L Street, N. W., Washington, D. C. (cotton)	900
Water Street, S. W., Washington, D. C. (cotton).	430

The additional cost to the Government for the annual rental of this new warehouse will therefore be \$10,870. Of this amount, \$1,380 will be saved in the appropriation for Rent in the District of Columbia and \$2,180 in the rental of buildings at Alexandria, the latter sum now being paid from bureau funds.

The demand for practical forms of cotton standards as prepared by the Department is increasing. The grades for timothy and similar hay grown in the East have been established but require further investigation. Producers' organizations in the Western States have urged that similar alfalfa grades be established, and the South is demanding grades

for Johnson grass hay. Before any of these grades can be established thousands of bales of hay must be examined and analyzed and fireproof storage provided for them. If these important and growing lines of work for the cotton and hay growers are to be adequately conducted, necessary fireproof accommodations are essential.

In a letter dated April 16, 1923, the Public Buildings Commission, by Senator Reed Smoot, Chairman, approved the rental of a building for the purposes outlined above.

(b) \$10,000 for building for Fixed Nitrogen Research Laboratory.

The Fixed Nitrogen Research Laboratory, originally organized by the War Department on March 29, 1919, under Section 124 of the National Defense Act of 1916, was transferred to the Department of Agriculture by Executive order on June 30, 1921. For the purposes of this laboratory, the American University of Washington, D. C., permitted the War Department to use, free of rent, what is known as the Ohio Building and adjacent grounds belonging to the University.

On the transfer of the Laboratory to the Department of Agriculture, free use of the Ohio Building and adjacent grounds was continued to the Department, by resolution of the trustees of the University, until June 30, 1922. In August, 1922, the trustees of the University applied to the Department of Agriculture for compensation for the use of their building and grounds. After a careful consideration of all the circumstances, including the fact that the University had given the Government free use of its property for approximately six years, the Department conceded the justice of the claim and entered into a lease covering the fiscal year 1923, with option of renewal for a term of years thereafter, at the rate of \$10,000 per annum. The Ohio Building provides approximately 50,000 square feet of floor space, so that the rate per square foot is only 20 cents, a very low figure for the building in question.

The Fixed Nitrogen Research Laboratory is financed by an allotment made by Executive Order from funds originally appropriated to the War Department (National Defense Act, 1916). It has been held by the

Comptroller that this allotment is not legally chargeable for the payment of rent in the District of Columbia and accordingly the rental for the fiscal year 1923 has been paid from an available balance in the appropriation "Rent of Buildings in the District of Columbia" and these estimates provide \$10,000 in this latter appropriation for the fiscal year 1925.

Floor space equivalent to that provided in the American University Building cannot possibly be secured elsewhere in Washington at as low a rate as 20 cents per square foot. Conceding, therefore, the justice of the claims of the American University for compensation for the use of its building, this estimate of \$10,000 rental for the fiscal year 1925 is necessary.

OFFICE OF EDITORIAL AND DISTRIBUTION WORK.

Statutory salaries. Apparent increase \$66,330; actual decrease \$9,788, as follows:

(a) Increase of \$77,958, as follows:

- (1) \$22,246 under Classification Act.
- (2) \$53,232 to provide for increase of compensation (\$240 bonus).
- (3) \$2,480 to provide positions for two clerks at \$1,000 each, with increase of compensation of \$240 in each case, transferred from the statutory roll, Bureau of Agricultural Economics.

(b) Decrease of \$11,628 as follows:

- (1) \$1,840 by transfer of one clerk, class 3, with \$240 increase of compensation to statutory roll, Office of the Secretary.
- (2) Actual decrease of \$9,788.

(Lump-sum items).

General expenses. Apparent decrease, \$13,850; actual decrease \$1,330, as follows:

(a) Increase of \$480, as follows:

- (1) \$160 under Classification Act, and
- (2) \$320 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$14,330, as follows:

(1) \$13,000 by transfer of this amount to the lump-sum appropriation for farmers' cooperative demonstrations, Extension Service, and

(2) Actual decrease of \$1,330.

The authorization for extra labor in the District of Columbia is increased from \$1,300 to \$2,930. The work of the office is seriously handicapped at times by reason of its inability to employ sufficient emergency assistance. Of the increase recommended (\$1,630) \$480 is to provide for increase under the reclassification act, departmental service, making a net increase of only \$1,200.

The language of the paragraph has also been amended by omitting the authority for the purchase and maintenance of motor trucks. In view of the present organization of the trucking service of the Department this authority is no longer necessary.

Printing and binding. Actual decrease of \$22,000.

The language of the item has been amended by eliminating the following clause: "or emergency field printing authorized by said joint committee." For several years past the Department has been authorized by the Joint Committee on Printing to expend from its lump-sum appropriations not to exceed \$7,500 for emergency field printing, that is, printing, performed outside of Washington under an emergency for the exclusive use of a field service. The omission of the above language from the printing and binding appropriation will require all such printing during the fiscal year 1925 to be paid for from the printing and binding appropriation.

OFFICE OF EXPERIMENT STATIONS.

Statutory Salaries. Apparent increase \$4,888 as follows:

(a) Increase of \$7,768 as follows:

- (1) \$1,576 under Classification Act.
- (2) \$6,192 to provide for increase of compensation (\$240 bonus).

(b) Decrease of \$2,880 by transfer of two clerks of class 1, with increase of compensation (\$240 bonus) in each case to the statutory roll, Secretary's Office.

(Lump sum items)

Relations with experiment stations. Apparent increase \$4,880 as follows:

(a) \$3,200 under Classification Act, and

(b) \$1,680 to provide for increase of compensation (\$240 bonus).

Insular experiment stations. Actual increase \$5,000, as follows:

(a) Increase of \$5,500 as follows:

(1) \$3,000 for Hawaii experiment station. This sum is for making sanitary provisions for the buildings and houses at the station, either by connecting with city sewer system or providing sanitary closets. No such provisions are now in existence and the Honolulu Board of Health has repeatedly requested their installation. The city is rapidly growing up to the station and the present lack of modern conveniences is considered a menace to the health of Honolulu.

THE UNIVERSITY OF CHICAGO
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AND ARCHITECTURE
OFFICE OF THE CURATOR
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(2) \$2,500 for Virgin Islands station to provide additional water supply. For three successive years the rainfall of St. Croix has been much below normal and as a result the plant breeding and horticultural work has suffered. In May of the present year only .6 inch rain fell and much of the plant breeding work was lost through a lack of water at critical stages of growth of the young plants. During several weeks it was necessary to haul water for the livestock at a cost of \$4.50 a day. A larger reservoir to store water will be constructed on a hill above the station, which will not only provide water for crop use but also will give some measure of fire protection.

(b) Actual decrease of \$500 in the amount for the the Alaska experiment station.

EXTENSION SERVICE

Statutory salaries: Apparent increase \$13,300; actual increase \$3,852 as follows:

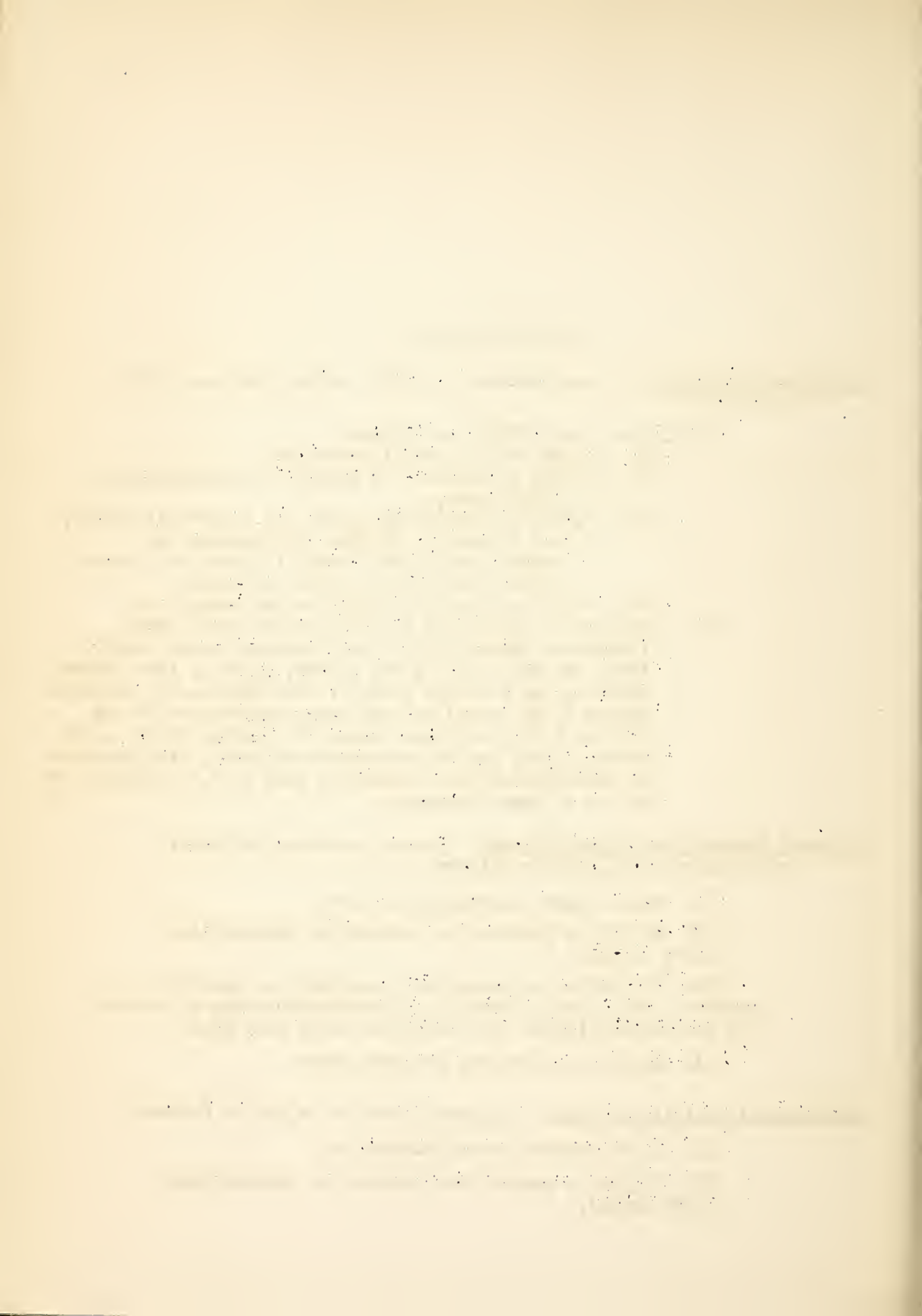
- (a) Increase of \$47,000 as follows:
 - (1) \$5,576 under Classification Act.
 - (2) \$34,512 to provide for increase of compensation (\$240 bonus).
 - (3) \$3,060, to provide positions for 1 clerk at \$1,320, and 1 clerk at \$1,260, with increase of compensation (\$240 bonus) in each case, transferred from Bureau of Home Economics.
 - (4) Actual increase of \$3,852 for new employees.
- (b) Decrease of \$33,700 by transfer of one chief clerk (executive clerk), \$2,000, one financial clerk, \$2,000; three clerks, class 4; two clerks, class 3; five clerks, class 2, and 4 clerks class 1, with increase of compensation (\$240 bonus) in each case, transferred to the Office of the Secretary; also, two clerks, class 2, one clerk \$1,100, and one messenger boy, \$600, with increase of compensation (\$240 bonus) in each case, transferred to Bureau of Home Economics.

Farmers' Cooperative Demonstrations. Apparent increase, \$26,090; actual increase \$2,500, as follows:

- (a) \$6,490 under Classification Act.
- (b) \$4,100 to provide for increase of compensation (\$240 bonus).
- (c) \$13,000 by transfer from lump-fund for general expenses, Office of Editorial and Distribution Work to provide for the motion-picture work conducted under this item.
- (d) \$2,500 for forestry extension work.

Agricultural exhibits at fairs. Apparent increase \$4,800 as follows:

- (a) \$1,440 under Classification Act.
- (b) \$3,360 to provide for increase of compensation (\$240 bonus).



World's Dairy Congress. Decrease \$30,000. This item is recommended omitted as the work provided thereby will be completed during the current fiscal year.

General administrative expenses. Apparent increase \$900, as follows:

- (a) \$180 under Classification Act, and
- (b) \$720 to provide for increase of compensation (\$240 bonus).



WEATHER BUREAU.

Statutory Salaries. Apparent increase, \$43,600; actual decrease \$21,091, as follows:

(a) Increase of \$64,691, as follows:

- (1) \$21,323 under Classification Act, and
- (2) \$43,368 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$21,091.

Lump-sum items.

Expenses in Washington. Apparent increase \$23,425; actual increase \$8,405, as follows:

(a) \$10,940 under Classification Act.

(b) \$4,080 to provide for increase of compensation (\$240 bonus).

(c) Actual increase of \$8,405, as follows:

(1) \$3,100 for instrumental equipment. Owing to the small allotment available for the maintenance of the instrumental equipment of the Weather Bureau, it has been necessary for several years past to constantly repair and reconstruct existing apparatus until at the present time it is in such bad condition that complete replacement in many cases is essential. The additional \$3,000 provided by the last Congress for this purpose was sufficient for the purchase of only a small part of the instruments, materials, supplies, and equipment.

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(2) \$2,000 for additional personnel, etc. An additional qualified technical man is needed at the Washington, D. C. District Forecast Center in connection with the forecast work. A slight increase is also needed for increasing the number of radio reports from vessels at sea.

(3) \$3,305 for meteorological work. An additional employee and certain necessary mechanical equipment and supplies are urgently needed in connection with the study of the influence of weather on crops and farm operations.

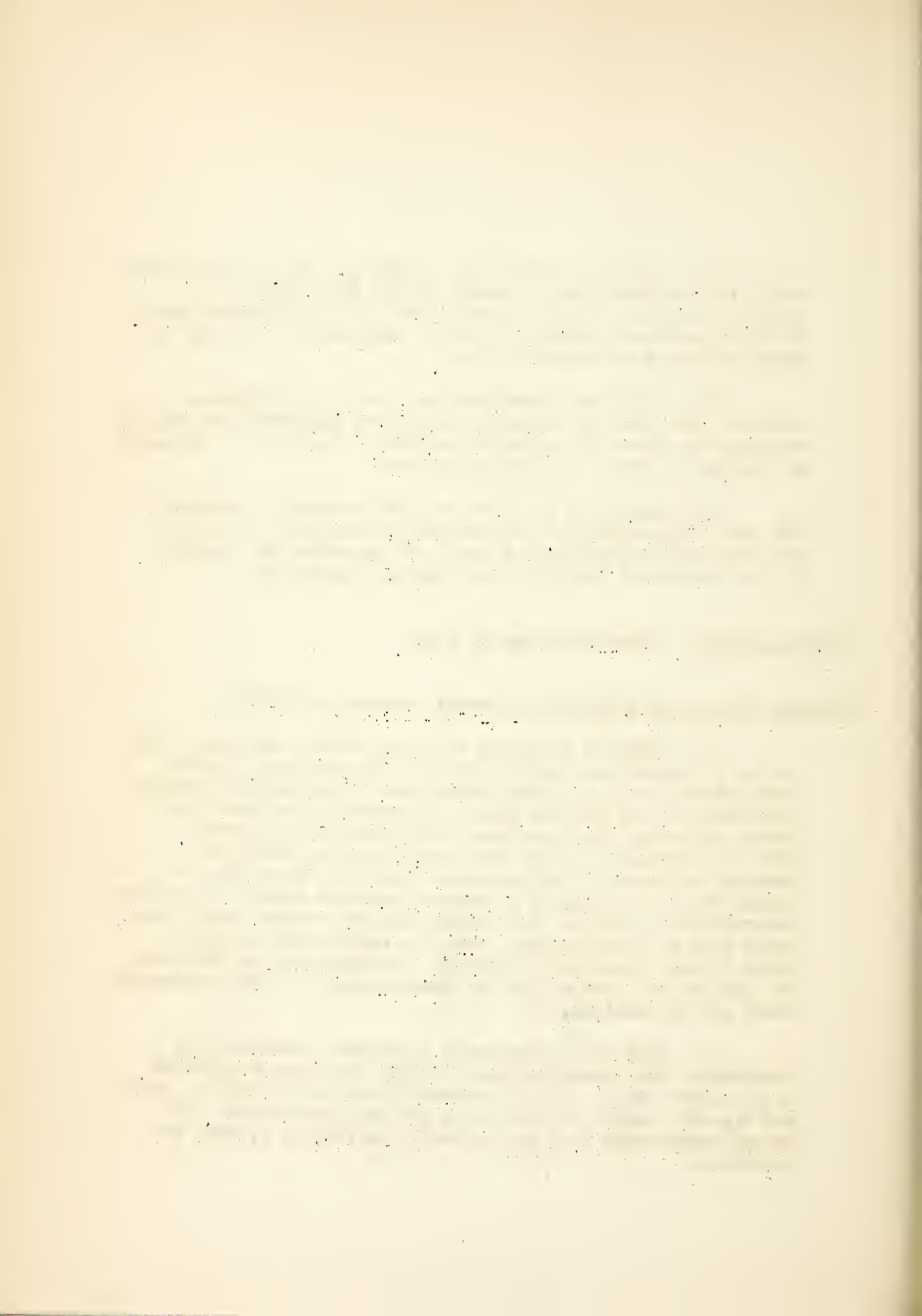
The language of the item has been amended by omitting the word "volcanology". This change is desirable in view of the fact that volcanological work will hereafter be conducted by the Geological Survey of the Interior Department.

Printing Office. Actual decrease of \$500.

Expenses Outside of Washington. Actual increase of \$7,495.

(a) \$500 for extension of radio weather service. Very few ship reports are received from the Pacific area although such information is of vital importance in forecasting weather conditions on the Pacific Coast on account of the fact that storms affecting this area come mostly from the westward. While the vessels that ply the Pacific are not nearly so numerous as those on the Atlantic, there is a considerable number which are equipped to furnish valuable reports of weather observations by radio. The Bureau receives reports from a very small part of these vessels, with the result that the ocean field is very imperfectly covered. The observers on shipboard are paid at the rate of 50¢ per observation for each observation taken and transmitted.

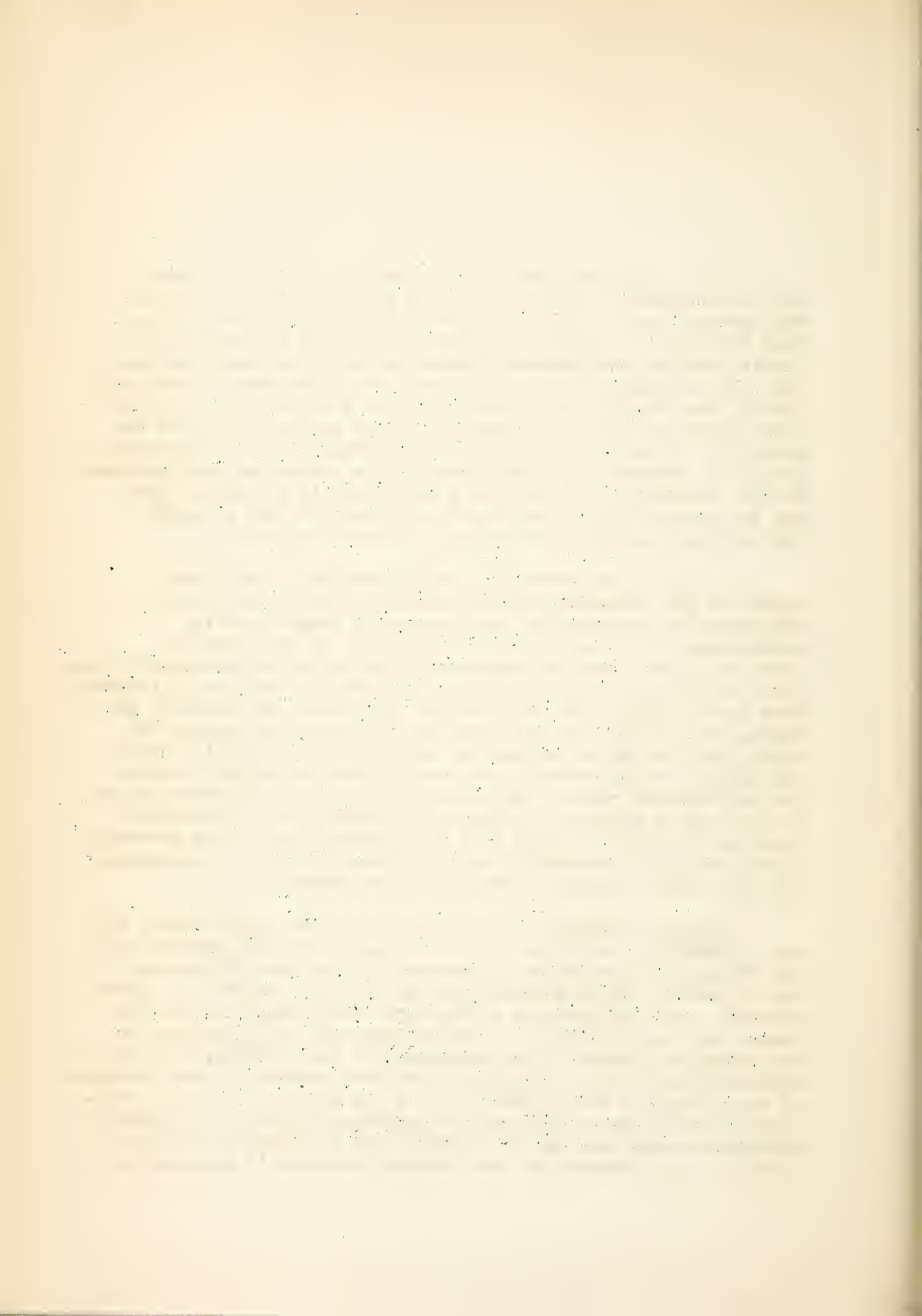
(b) \$495 for instrumental equipment. Purchases of instruments for meteorological purposes have been restricted to a minimum during the last several years and additional funds are urgently needed to purchase a few new instruments. The amount recommended will not be nearly sufficient to meet the situation.



(c) \$2,500 for repairs to buildings at field stations and for increased rentals. There has been no material increase for several years in the funds from which expenditures of this kind are made. The great increase in rents and in the cost of repair work has made serious inroads on available appropriations. Only the most urgent necessities have been taken care of with the result that many of the 47 buildings have deteriorated, and major repairs can no longer be postponed without serious injury to the property. It has been necessary to meet the demands for increased rentals by reducing the floor space. This policy has been followed to such an extent that it is no longer possible to curtail space, and the Bureau will be confronted next year with the necessity for meeting reasonable demands for increased rentals.

(d) \$4,000 for additional field personnel. Additional observers and meteorologists are needed at many field stations. The number of employees on regular weather bureau work is approximately the same as it was years ago. In the meantime, there has been a material increase in the duties and responsibilities imposed on the Bureau in supplying more detailed and useful information to the public than ever before. The growth of aviation, the inauguration of the dissemination of the weather information by radio, and the normal increase of activities of the nation create new demands on the Bureau. Our need is greatest at the District Forecast Centers where it is necessary that the forecasters assist in the work of plotting, decoding, and charting the telegraphic reports, thereby preventing them from giving their entire attention to the study and preparation of the charts, which is so essential, and this small increase is asked for this purpose.

Change in language. The language for the appropriation for out of Washington expenses has been changed, with the approval of the Director of the Budget, by omission of the word "volcanology", and of certain language specifying not to exceed amounts of appropriation. (a) The omission of the word "volcanology" is for the reason that investigations in volcanology will be transferred to the Geological Survey of the Department of the Interior, it being understood that corresponding changes have been made in the estimates of that branch of the Government. (b) By omitting the clause "including not to exceed \$710,080 for salaries; \$130,470 for special observations and reports, and \$299,450 for telegraphing and telephoning". The omission of this limiting language is desirable so



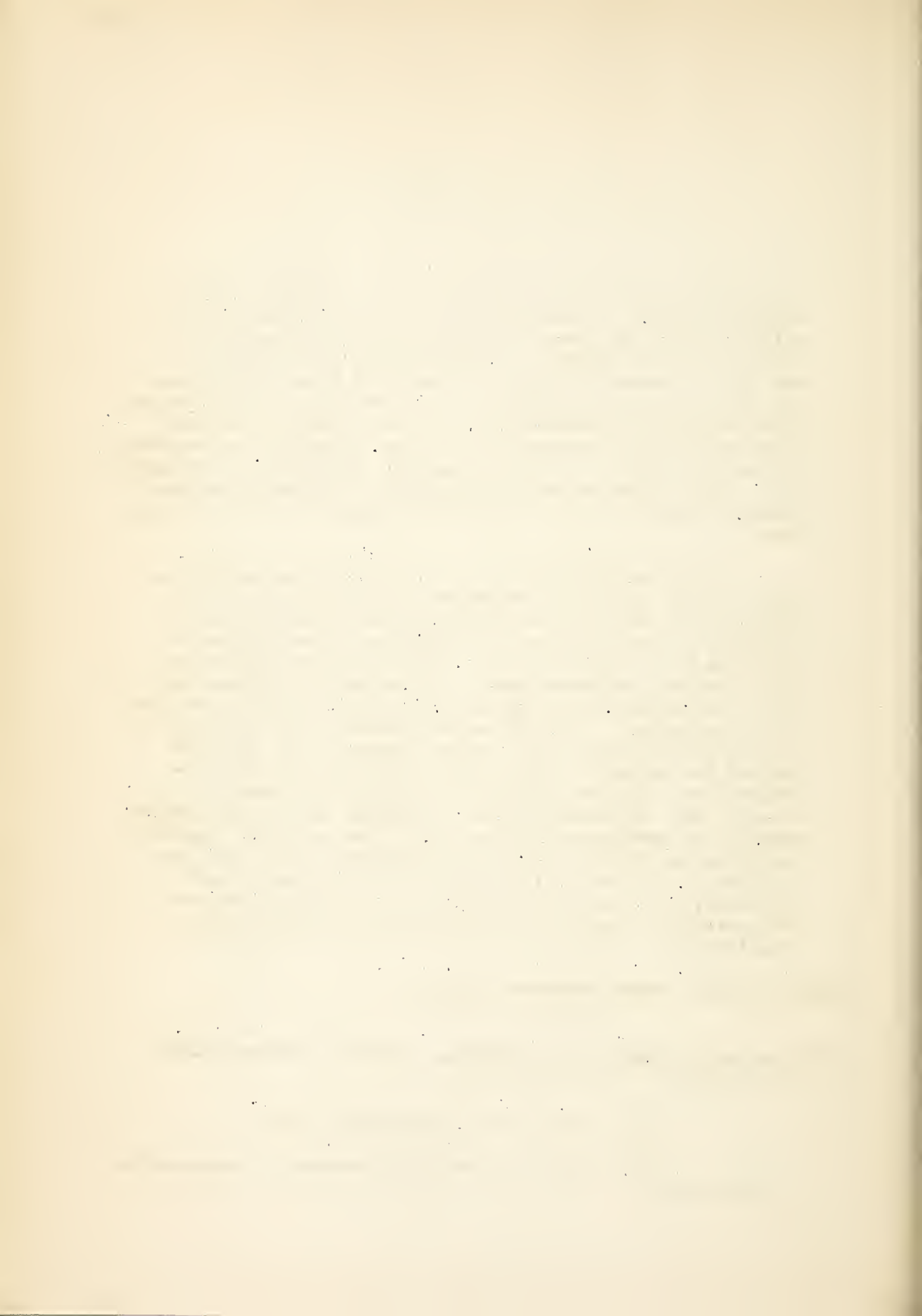
as to permit greater flexibility in the expenditure of the appropriation and to simplify administrative accounting. As will be noted, the amounts set up for salaries, special observations and reports, and telegraphing and telephoning are "not to exceed" amounts. The total of these amounts does not equal the amount provided by the paragraphs, the difference being available for expenditure only for purposes other than those specifically enumerated. Past experience has demonstrated the undesirability of this arrangement. Contingencies frequently arise which cannot be met on account of the limiting language although sufficient funds are available under the total of the item.

In the hearings before the Director of the Budget, the Department of Agriculture consented to the reduction of the field appropriations of the Weather Bureau in the amount of \$10,000 for investigations in volcanology. The estimates as submitted show a net increase of \$7,495, the expenditure of which has been indicated above. The transfer of volcanology may in effect involve an actual increase of \$10,000 in addition to the foregoing. Any funds becoming available in this way are seriously needed in the general betterment of the field work of the Bureau, for which increased funds have been requested over and over again, but granted only in part or not at all. Such an increase would be used for the general betterment of the service as follows: \$2,500 for rents and repairs; \$1,000 for additional instruments, equipment, etc.; \$500 for additional radio reports; and \$8,000 for additional field personnel. All these are real needs and if met in this way will materially improve the efficiency of the entire field organization.

Frost Warnings. Actual decrease of \$1,970.

Investigation of Atmospheric Phenomena. Apparent increase \$3,760,
as follows:

- (a) \$1,840 under Classification Act.
- (b) \$1,920 to provide for increase of compensation (\$240 bonus).



BUREAU OF ANIMAL INDUSTRY.

Statutory Salaries. Apparent increase \$42,520; actual decrease \$13,356, as follows:

(a) Increase of \$60,876, as follows:

- (1) \$3,652 under Classification Act, and
- (2) \$52,224 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$18,356.

(Lump-sum items)

Inspection and Quarantine. Apparent decrease, \$1,640; actual decrease \$4,280 as follows:

(a) Increase of \$2,640 as follows:

- (1) \$1,920 under Classification Act.
- (2) \$720 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$4,280.

The proviso authorizing the use of \$15,000 for improvements and repairs to quarantine stations is recommended omitted.

Eradication of Tuberculosis. Apparent decrease \$19,343; actual decrease, \$25,553, as follows:

(a) Increase of \$5,710, as follows:

- (1) \$3,070 under Classification Act.
- (2) \$2,640 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$25,553 in item for operating expenses.

Eradication of Cattle Ticks. Apparent decrease, \$23,770; actual decrease \$26,126, as follows:

(a) Increase of \$2,356, as follows:

- (1) \$1,732 under Classification Act.
- (2) \$624 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$26,126.

Dairy Industry. Apparent increase, \$450; actual decrease \$11,150, as follows:

(a) Increase of \$11,600 as follows:

- (1) \$5,320 under Classification Act.
- (2) \$6,280 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$11,150.

Animal Husbandry. Apparent decrease \$4,560; actual decrease \$7,680, as follows:

(a) Increase of \$5,120 as follows:

- (1) \$720 under Classification Act.
- (2) \$2,400 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$7,680.

Diseases of Animals. Apparent increase, \$6,000, as follows:

(a) \$3,840 under Classification Act, and

(b) \$2,160 to provide for increase of compensation (\$240 bonus).

Hog Cholera. Apparent decrease \$2,020; actual decrease, \$4,580, as follows:

(a) Increase of \$2,560, as follows:

- (1) \$1,600 under Classification Act.
- (2) \$960 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$4,580.

Eradication of Dourine. Apparent decrease, \$4,760; actual decrease \$5,020, as follows:

(a) Increase of \$260 as follows:

- (1) \$20 under Classification Act.
- (2) \$240 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$5,020. Satisfactory progress is being made in the control of dourine and this reduction is recommended by the Department.

Construction work at Beltsville, Maryland. Decrease of \$20,000.

The following paragraph is omitted as the work authorized thereby will be completed during the current fiscal year.

"For the construction of a dairy barn at Bureau Experiment Farm at Beltsville, Maryland, \$20,000."

Administrative expenses. Apparent increase \$1,200 as follows:

- (a) \$480 under Classification Act, and
- (b) \$720 to provide for increase of Compensation (\$240 bonus).



Meat Inspection. Apparent increase \$204,970; actual increase \$197,530, as follows:

(a) \$3,260 under Classification Act.

(b) \$4,130 to provide for increase of compensation (\$240 bonus).

(c) \$197,530 for enforcing the Meat Inspection Act. Immediately following the war period a situation developed in the packing industry which necessitated the operation of packing plants at their maximum output, covering long periods of overtime and continued operation on Sundays and holidays, during which it was necessary to maintain the usual high standard of Federal meat inspection. By reason of the extremely low pay of employees in the meat inspection service as compared with the wages earned by employees of the packing plants, it was found practically impossible to continue effective Federal inspection without some definite action with regard to wages of the Federal employees, who were required to be on hand whenever the establishments were in operation. Consequently, in the Agricultural appropriation act for the fiscal year 1920, provision was made for the payment of overtime work performed by Federal employees in packing establishments. Since the enactment of this legislation an arrangement for payment of overtime and the acceptance of reimbursement for the same from the packers has been in effect. During the fiscal year 1923 the amount paid by the packing establishments for overtime work of Federal inspectors under this authorization was \$262,495. Overtime is allowed on the basis of time-and-a-half for week days and double time for Sundays and holidays.

The arrangement whereby the packers were to reimburse the Government for payment of overtime to its inspectors as outlined above was adopted purely as an emergency measure. The practice of permitting the meat industry to pay a part of the cost of inspection, where the whole public is involved, is unsound. This was well understood when the meat inspection law was originally passed and Congress provided a permanent annual appropriation of \$3,000,000 for carrying on the work of inspection. Further recognition of this principle is evidenced by the supplemental appropriations which Congress has made from year to year in the regular Agricultural Acts for the enforcement of the meat inspection law and regulations.



With the return of more normal conditions the Department believes that the old principle under which the Government paid for all its inspections should again be asserted. The Department's purpose will be to meet the situation from its appropriations to an extent comparable with the sum paid for overtime by the packing establishments since the law of July 24, 1919, went into effect. The forces engaged in meat inspection work are now assigned and the work is administered in such a manner as to render maximum service at a minimum cost. By constant realignment of forces the meat inspection work has steadily increased without additional appropriations. The animals slaughtered and the amount of meat food products inspected in 1922 were considerable more than in 1921. During the fiscal year 1923, the number of animals inspected was 10,000,000 more than in 1922 and the number of pounds of meat food products inspected was 1,400,000,000 more than in the preceding year. Thus the volume of work to be handled is increasing while appropriations are not. On the contrary, the appropriation for the current fiscal year is \$25,000 less than for 1923. In order to carry out the plan above indicated, \$205,000 additional will be required.

Instead of paying present inspectors for overtime, it is planned (1) to increase the number of inspectors at the larger establishments, and (2) to provide relief inspectors at small stations to compensate the regular inspectors for overtime services rendered. Under this arrangement, the increase allowed will provide for 50 additional veterinary inspectors and 70 additional lay inspectors and leave about \$7,000 for paying the expenses of relief men.

BUREAU OF PLANT INDUSTRY.

Statutory Salaries. Apparent increase \$104,900; actual decrease \$11,716; as follows:

(a) Increase of \$116,616, as follows:

- (1) \$27,632 under Classification Act, and
- (2) \$88,984 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$11,716.

(Jump-sum items)

Pathological Laboratory. Apparent increase, \$4,000; actual decrease \$2,320; as follows:

(a) Increase of \$6,320 as follows:

- (1) \$2,000 under Classification Act, and
- (2) \$4,320 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$2,320.

Fruit disease investigations. Apparent increase, \$85; actual decrease, \$6,335 as follows:

(a) Increase of \$6,420, as follows:

- (1) \$3,780 under Classification Act.
- (2) \$2,640 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$6,335.

Citrus Canker. Apparent decrease \$2,440; actual decrease \$3,220; as follows:

(a) Increase of \$780, as follows:

- (1) \$60 under Classification Act.
- (2) \$720 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$3,220.

Forest Pathology. Apparent increase \$3,220, as follows:

(a) \$2,500 under Classification Act.

(b) \$720 to provide for increase of compensation (\$240 bonus).

Blister Rust Control. Apparent increase \$18,440; actual increase \$14,960, as follows:

(a) \$1,560 under Classification Act.

(b) \$1,920 to provide for increase of compensation (\$240 bonus).

(c) \$14,960 for control of the white pine blister rust, etc. The increase of \$14,960 for the fiscal year 1925 will be used entirely for enlargement of the work in the West, chiefly for reconnoissance surveys of white pine areas, for continuing the campaign for eradicating the cultivated black currants, for maintaining cooperative quarantine inspection, and for carrying out the provisions of both State and Federal quarantines.

The presence of the blister rust in western North America was first discovered in 1921. It was introduced on pine seedlings from France planted near Vancouver, British Columbia, about 1910.



Climatic conditions of the West favored rapid spread of the rust and today it is epidemic on pine throughout the coastal pine belt of British Columbia. In local areas where the disease has been established for several years the western white pine crop will be a total loss within an additional ten-year period. From these centers of heavy infection the disease is spreading east and south. The outbreak stage on pine has already extended well into the inland pine belt of British Columbia 250 miles away, at points only approximately 100 miles north of our valuable Inland Empire western white pine tracts, while the advance spread on cultivated black currants has recently been found in British Columbia and adjacent Washington within 40 miles of our Inland Empire pines. This rapid and unavoidable eastward spread of the blister rust from western British Columbia is an immediate menace to our western white pine belt comprising northeastern Washington, northern Idaho and northwestern Montana. Southward extension of the disease has been somewhat slower than the spread north and east; however, its advance spread on cultivated black currants has already extended throughout the coastal region of Washington to the mouth of the Columbia River, for a distance of 250 miles. The extension of the disease in this region is a direct menace to the sugar pine belts of Oregon and California.

Our two best timber species in the West comprising the western white pine of Washington, Idaho, and Montana and the sugar pine of Oregon and California are highly susceptible, and since the rust is rapidly encroaching from numerous infection centers in British Columbia, time for accomplishing local control of the disease is a chief factor in our western States, especially in those western white pine belts adjacent to Western Canada. During the past two seasons the Department of Agriculture in cooperation with these states has successfully maintained rigid quarantines against the infected regions and vigorously prosecuted a campaign to eliminate the primary host plants (cultivated black currants) throughout the pine growing states.

The outbreak of white pine blister rust discovered in the State of Washington in November, 1921, created a national emergency which required immediate action by the Federal government. To meet this emergency, Congress made an urgent deficiency appropriation of \$150,000 for the period March 21, 1922 to March 31, 1923; and a second deficiency appropriation of \$30,000 for the period April 1 to June 30, 1923. (Note: These amounts were additional to \$200,000 in the regular Agricultural Appropriation Act for the fiscal year 1923 for carrying out the cooperative blister rust control campaign in the

Eastern States, which was under way before the discovery of blister rust in the West; and to \$250,000 in the regular Agricultural Appropriation Act for the fiscal year 1924, of which amount \$200,000 was for the work in the East and \$50,000 for work in the West.)

The deficiency appropriations were used by the Department in determining the exact situation with respect to the outbreak, and in working out a comprehensive plan for combating the disease in the West. The scope of this work was ample to show that the disease was not generally established in the Northwestern United States and that infection on currants was the result of general spread of the disease from heavily infected pines in British Columbia. The rust is advancing into the Inland Empire pine region. In 1923 it was found on cultivated black currants at six points in Okanogan and Ferry counties, Washington, and at numerous points in eastern British Columbia where it has reached a point on the Columbia River within 40 miles of the commercial pine belt. The following plan was worked out in conference with the various States and other interests involved:

1. Rigid enforcement of quarantines to prevent introduction of the disease at points where it is not yet present.
2. Abandonment in the western states of the growing of cultivated black currants, the most susceptible host of the blister rust and the most active agent in long distance spread and establishment of the disease.
3. Experiments to determine the cost and scope of applying local control measures in regions where the white pines are of the greatest present and future importance, and development of the most economical methods of applying local control.
4. Investigation of the scientific facts of this disease under western conditions, its rate of progress and damage, susceptibility of host plants, and discovery of natural factors which may be used to retard spread or to increase effectiveness of control work.
5. Educational and demonstrational work to secure the adoption of the best methods of controlling the disease through cooperation with State, private and other agencies responsible for the protection and management of western forests.



Accomplishment under this program shows that from now on the principal feature of blister rust control work in the West is local protection of the valuable white pine areas by systematically clearing the ground of wild currant and gooseberry bushes before the pine stands on Government, State and private lands become severely damaged by blister rust. Because of its large holdings, the Federal Government is deeply and directly interested in dealing promptly and adequately with the blister rust problem in the West. The present merchantable stand of western white and sugar pine is estimated at 57 billion board feet, valued at \$228,400,000 of which the Federal Government owns some 20 billion board feet. In addition, there are from 12 to 13 million acres of young growth in which western white pine or sugar pine should form permanently an important part of the timber crop. The general establishment of the blister rust in the commercial white pine areas will eventually cause severe economic loss unless adequate measures for its control are developed and applied under western conditions.

In the Fiscal year 1924, the deficiency appropriations for the West were discontinued and appropriations for blister rust work in the East and West were merged in one item of \$250,000 in the regular agricultural appropriation. In the fiscal year 1923 the blister rust item in the regular agricultural appropriation was \$200,000. This apparent increase of \$50,000 in the fiscal year 1924 was in reality a decrease of \$94,000 in funds for work in the West.

Cotton and truck diseases. Apparent decrease \$2,260; actual decrease \$6,700; as follows:

(a) Increase of \$4,440, as follows:

- (1) \$2,330 under Classification Act.
- (2) \$2,060 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$6,700.

Crop Physiology Investigations. Apparent increase \$1,260, as follows:

(a) \$780 under Classification Act.

(b) \$480 to provide for increase of compensation (\$240 bonus).



Bacteriology and Nutrition. Apparent increase \$2,510; actual decrease \$690; as follows:

(a) Increase of \$3,200 as follows:

- (1) \$1,520 under Classification Act.
- (2) \$1,680 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$690.

Soil Fertility Investigations. Apparent increase \$3,540, as follows:

(a) \$2,100 under Classification Act.

(b) \$1,440 to provide for increase of compensation (\$240 bonus).

Crop Acclimatization. Apparent increase \$72,950; actual increase \$70,000, as follows:

(a) \$790 under Classification Act.

(b) \$2,160 to provide for increase of compensation (\$240 bonus).

(c) \$70,000 for rubber exploration investigations. While this appears as an actual increase of \$70,000 it is merely a continuation of work about as at present conducted with an actual reduction of \$5,000. Of the \$100,000 appropriation for the exploration of rubber producing regions and studies and experiments with rubber producing plants provided by the Deficiency Appropriation Act of March 4, 1923, approximately \$25,000 was expended during the fiscal year 1923, leaving \$75,000 available for this work during the current fiscal year.



Some four or five exploring parties are in the field in various portions of the West Indies and Central and South America, and the work is being vigorously prosecuted in order that potentially important rubber-producing plants may quickly be assembled for testing at suitably located field stations where those of promise for the future can be studied, their habits of growth determined, methods of extraction devised, and other important features investigated which might prove significant to the rubber industry or of importance in establishing rubber reserves.

In connection with the exploration work now under way in foreign countries for studying the native conditions and habits of rubber-producing plants and to procure seeds or cuttings for propagation, it is essential that experimental plantings be undertaken and carried forward as rapidly as possible. A few of the plants known to contain rubber have already been assembled for experimental planting at Chapman Field in Florida, at San Diego, Calif., and in the Canal Zone.

The plantings at Chapman Field are being made in connection with the establishment of one of the Bureau plant introduction gardens at that point. At San Diego, land has been provided by the city at a purely nominal rental, and the development of a small rubber experimental station is in progress. Plantings will be made at the Bureau field station at Bard, Calif. in connection with the studies of acclimatization of other plants. Preliminary arrangements for establishing a small experimental propagation station in Haiti and for a more extensive propagation and experimental station in the Canal Zone have been made.

Summary of Expenditures

Chapman Field, Fla.....	\$2,000
San Diego, Calif.....	10,000
Bard, Calif.....	6,000
Haiti.....	8,000
Panama.....	15,000
Explorations in Tropical America, East Indies, and Africa.....	5,000
Salaries.....	<u>34,000</u>
Total.....	\$70,000

To provide for this work under the item for crop acclimatization investigations, the following proviso is recommended to be inserted at the end of the paragraph:

"Provided further, That of this sum \$70,000 may be used for explorations, research, and field experiments relating to potential rubber-producing plants".

Drug and other Plants. Apparent increase \$2,040, as follows:

- (a) \$1,560 under Classification Act.
- (b) \$480 to provide for increase of compensation (\$240 bonus).

Crop Technology. Apparent increase \$6,560, as follows:

- (a) \$2,780 under Classification Act.
- (b) \$3,780 to provide for increase of compensation (\$240 bonus).

Seed Testing Laboratory. Apparent increase \$5,190, as follows:

- (a) \$2,680 under Classification Act.
- (b) \$2,510 to provide for increase of compensation (\$240 bonus).

The language of the paragraph has been amended by adding a proviso authorizing the use of \$250 for meeting the share of the United States in the expenses of the International Seed Testing Congress in carrying out the plans for correlating the work of the various adhering Governments on problems relating to seed analyses or other subjects which the Congress may determine to be necessary in the interest of international seed trade. The expenses of this work to the end of 1924 will be borne by the British Government, but the British Ministry of Agriculture has requested this and other Governments to make contributions for defraying the expenses of the Congress beginning with the calendar year 1925.

Cereal Investigations. Apparent decrease \$13,285; actual decrease \$22,785; as follows:

(a) Increase of \$9,500 as follows:

- (1) \$4,220 under Classification Act.
- (2) \$5,280 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$22,785.

Unfortunately there is an error in the printed estimates with reference to the sum of \$395,000 carried in the proviso for the eradication of the common barberry; this figure should be cancelled and in its place should be inserted \$411,315. In the further limiting proviso is also an error; the sum of \$95,000 should read \$111,315.

The decrease of \$22,785 is apportioned between the general activities of this item and the barberry eradication work, the general activities being reduced by the sum of \$9,100, and the barberry eradication work will be reduced by the sum of \$13,685.

Tobacco Investigations. Apparent decrease \$3,009; actual decrease \$3,949; as follows:

(a) Increase of \$940, as follows:

- (1) \$640 under Classification Act.
- (2) \$300 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$3,949.

Alkali and Drought Resistant Crops. Actual decrease of \$525.

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Sugar-plant investigations. Apparent increase \$5,840; actual increase \$4,170; as follows:

(a) \$230 under Classification Act.

(b) \$1,440 to provide for increase of compensation (\$240 bonus).

(c) \$4,170 for investigations of sugar-beet diseases. An additional specialist will be employed for investigating diseases of sugar beets in the Arkansas Valley and Western areas with a view to developing practical means for control of curly-top, leaf spot and phoma rot. The relation of disease control to the sugar beet industry is peculiar in that when factories once become established in a section they are necessarily dependent on the maintenance of production within economically possible hauling and shipping distances. One of the most disturbing hazards which sugar beet manufacturers have to consider in locating factories is the practicability of controlling diseases and insect pests continuously in the sections on which they draw for their raw material. In cases where methods of controlling pests have not been developed, losses to the investor in manufacturing facilities, as well as to farmers, are sure to be heavy. Every effort should therefore be made to safeguard the capital required for the normal development of our sugar production to meet the growing consumption requirements. This project is one of major importance and should be prosecuted vigorously, effectively, and promptly.

Economic and Systematic Botany. Apparent increase \$2,300; actual decrease \$2,100; as follows:

(a) Increase of \$4,400 as follows:

(1) \$3,240 under Classification Act.

(2) \$1,160 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$2,100.



Dry Land Agriculture. Apparent decrease \$8,479; actual decrease \$9,239; as follows:

(a) Increase of \$760, as follows:

(1) \$520 under Classification Act.

(2) \$240 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$9,239.

Western Irrigation Agriculture. Apparent decrease \$1,245; actual decrease \$2,665; as follows:

(a) Increase of \$1,420 as follows:

(1) \$700 under Classification Act.

(2) \$720 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$2,665.

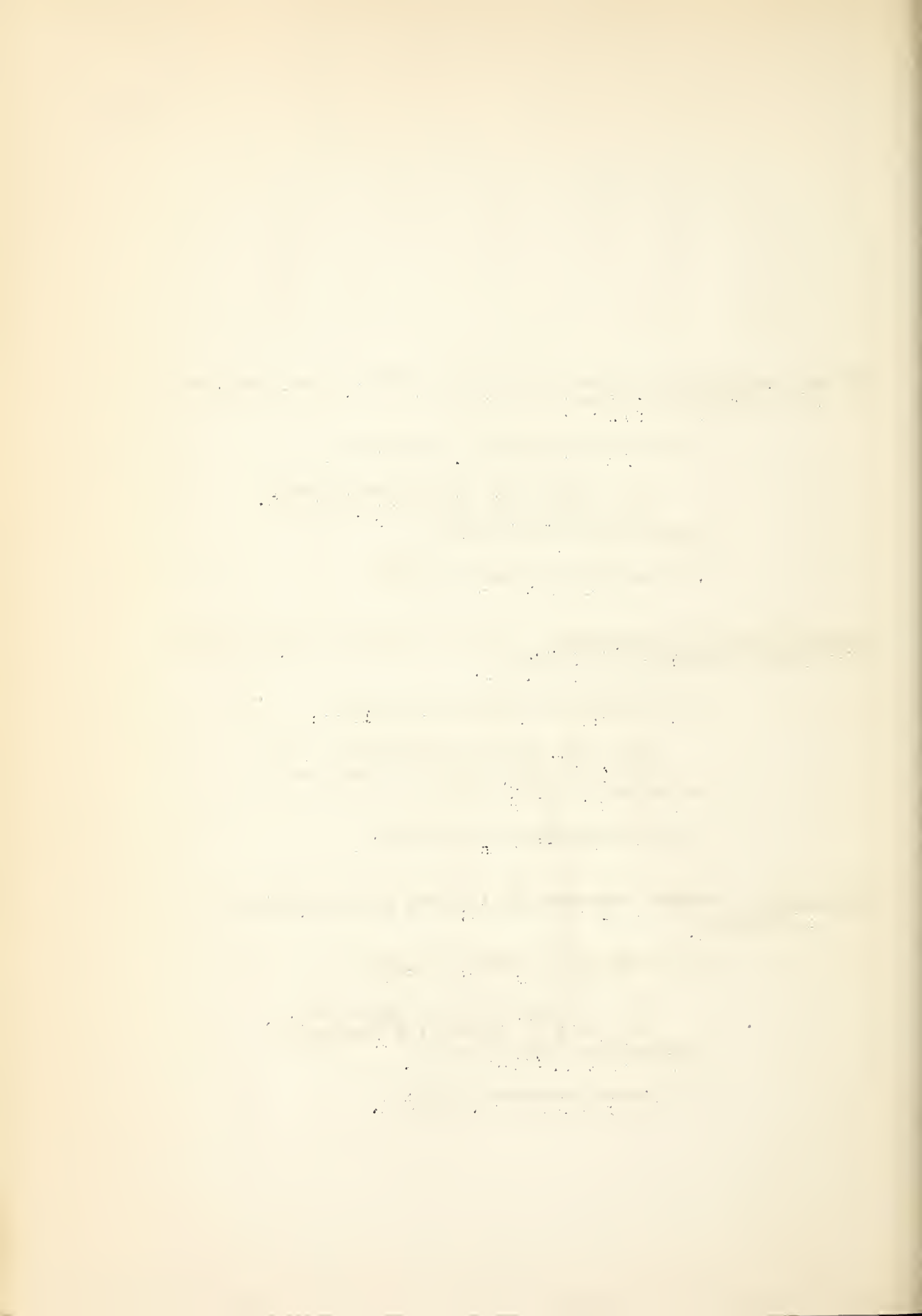
Nut Culture. Apparent decrease \$560; actual decrease \$863; as follows:

(a) Increase of \$303 as follows:

(1) \$23 under Classification Act.

(2) \$280 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$863.



Pomological Investigations. Apparent increase \$7,425; actual increase \$4,332; as follows:

- (a) \$1,173 under Classification Act.
- (b) \$1,920 to provide for increase of compensation (\$240 bonus).
- (c) \$4,332 for fruit handling, transportation, and storage.

The additional funds will provide for a slight increase in the investigation of certain fruit-curing and storage problems, especially connected with water transportation of Pacific Coast citrus and deciduous fruits to Atlantic ports and to European destinations by way of the Panama Canal.

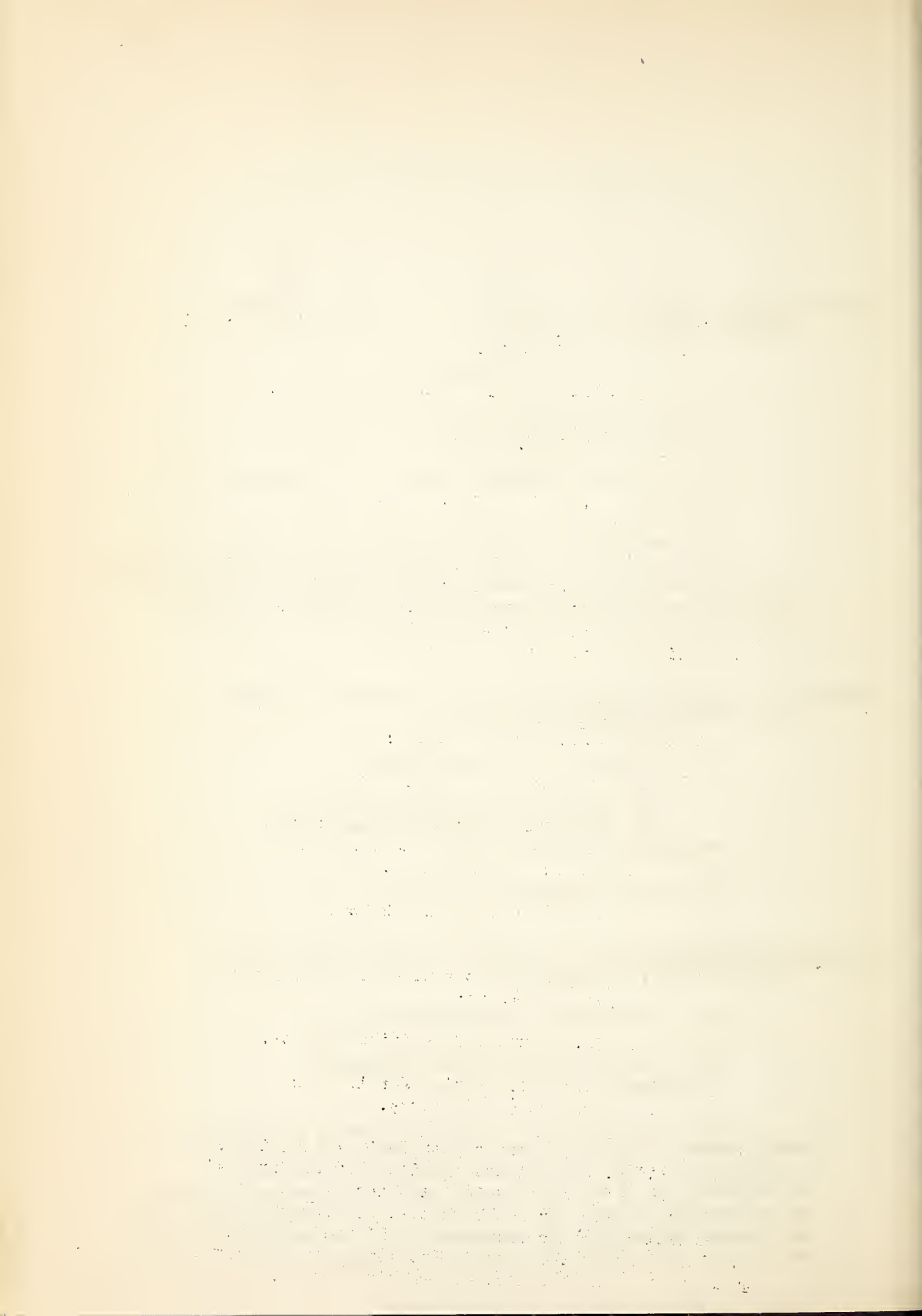
Experimental Gardens and Grounds. Apparent decrease \$1,520; actual decrease \$2,080; as follows:

- (a) Increase of \$560 as follows:
 - (1) \$80 under Classification Act.
 - (2) \$480 to provide for increase of compensation (\$240 bonus).
- (b) Actual decrease of \$2,080.

Horticultural Investigations. Apparent increase \$6,162; actual increase \$3,794; as follows:

- (a) \$1,008 under Classification Act.
- (b) \$1,360 to provide for increase of compensation (\$240 bonus).

(c) \$3,794 for vegetable improvement and variety stabilization. This increase will provide for a slight enlargement of work in vegetable improvement and variety stabilization to cover the special studies of varietal purity of unusual importance, in the handling of commercial seeds, the development of methods of production, and the protection of the quality of seed stocks of superior varieties.



Nursery Stock Investigations. Apparent decrease \$340; actual decrease \$1,083; as follows:

(a) Increase of \$743 as follows:

- (1) \$223 under Classification Act.
- (2) \$520 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$1,083.

Arlington Farm. Actual decrease of \$500.

Foreign Seed and Plant Introduction. Apparent increase \$4,760, as follows:

(a) \$2,120 under Classification Act.

(b) \$2,640 to provide for increase of compensation (\$240 bonus).

Forage Crop Investigation. Apparent increase \$4,360 as follows:

(a) \$2,680 under Classification Act.

(b) \$1,680 to provide for increase of compensation (\$240 bonus).

Biophysical Investigations. Apparent increase \$1,452; actual decrease \$988, as follows:

(a) Increase of \$2,440, as follows:

- (1) \$520 under Classification Act.
- (2) \$1,920 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$988.

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Administrative expenses. Apparent increase \$1,680, as follows:

(a) \$430 under Classification Act.

(b) \$1,200 to provide for increase of compensation (\$240 bonus).

The language of the item has been amended by substituting the word "associate" for the word "assistant" in the third clause. This change is desirable as the present organization of the bureau provides for an Associate Chief instead of an Assistant Chief as heretofore.



FOREST SERVICE.

Statutory salaries. Apparent increase \$29,883; actual decrease \$25,833, as follows:

(a) Increase of \$55,716 as follows:

- (1) \$19,332 under Classification Act.
- (2) \$36,384 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$25,833.

(Lump-sum items)

National forests. Apparent increase \$21,640, as follows:

(a) \$7,224 under Classification Act.

(b) \$1,416 to provide for increase of compensation (\$240 bonus).

(c) \$13,000 for Olympic National Forest. While this is an apparent increase, it merely represents a transfer to the general expense item for national forest district No. 6 of \$13,000 of the \$25,000 provided under the miscellaneous section of the Agricultural Appropriation Act for emergency expenditures incident to the disposal of windthrown and intermingled or adjoining timber on the Olympic National Forest. On account of the Olympic blowdown a deficiency appropriation of \$100,000 was provided in 1921. An unexpended balance of \$52,000 at the close of 1921 was reappropriated for 1922, and appropriations of \$33,000 and \$25,000, respectively, were made for 1923 and 1924. The fire danger has so diminished that only \$13,000 is requested for 1925. This amount is included in the district 6 item as the Olympic National Forest is administered as part of that district.

CHAPTER I

THE HISTORY OF THE UNITED STATES OF AMERICA

FROM 1776 TO 1876

BY JAMES M. SMITH

NEW YORK

1876

PUBLISHED BY THE AUTHOR

AT THE NEW YORK OFFICE

OF THE PUBLISHERS

JOHN W. SMITH

THE HISTORY OF THE UNITED STATES OF AMERICA, FROM 1776 TO 1876, BY JAMES M. SMITH. NEW YORK: PUBLISHED BY THE AUTHOR, AT THE NEW YORK OFFICE OF THE PUBLISHERS, JOHN W. SMITH. 1876.

The following changes in language are also recommended:

(a) In the item for National forest district 1, omit the first proviso. The work of marking graves of fire fighters buried at Saint Maries, Idaho, will be completed during the fiscal year 1924.

(b) In the item for National forest district 4, add "Colorado".

(c) In the item for National forest district 7, insert "Maryland".

Fighting and preventing forest fires. Apparent increase \$32,700; actual decrease \$2,300. While this represents an apparent increase of \$32,700, it merely involves the transfer of the item now carried in the miscellaneous section of the Agricultural appropriation act, providing for the establishment and maintenance of a patrol to prevent trespass and to guard against and check fires upon the land revested in the United States by the Act of June 9, 1916, and the lands known as the Coos Bay Wagon Road lands involved in the case of Southern Oregon Company against the United States (numbered 2711) in the Circuit Court of Appeals of the Ninth Circuit. The transfer of these funds to the fire fighting item will facilitate the handling of the appropriation.

The language of the item is recommended changed in the following respects:

(1) By inserting the following after the word "fires" in line 1:

"On or threatening the National Forests, and for the establishment and maintenance of a patrol to prevent trespass and to guard against and check fires upon the lands revested in the United States by the Act approved June 9, 1916, and the lands known as the Coos Bay Wagon Road lands involved in the case of Southern Oregon Company against United States (numbered 2711) in the Circuit Court of Appeals of the Ninth Circuit,"

The words "on or threatening the national forests" provide authority for fighting and preventing fires not only on the national forests but also on adjacent lands where the occurrence of fires may threaten the national forests.



The remainder of the inserted language merely represents the transfer of the item for "Protection of the So-called Oregon and California Railroad Lands and Coos Bay Wagon Road Lands" now carried in the Miscellaneous section of the bill, involving no change in total funds; the transfer being recommended in the interest of simplicity in handling the appropriations.

(2) By inserting the words "by the Secretary of Agriculture" after the word "used", in line 3.

(3) By inserting the clause "on National Forests, National Parks, Indian Reservations, or other lands under the ownership or control of the United States" after the word "insects".

These changes in language are desirable in order to make funds for forest insect control work available in the discretion of the Secretary of Agriculture for combating forest insect pests on any lands owned or controlled by the United States, in cooperation with the Department (usually the Interior Department) having the custody of forest land outside of the National Forests, instead of having the work under the appropriation stopped at the National Forest boundary. The protection of valuable timber from insects is as important as its protection from fire, and experience has demonstrated that control measures must often embrace areas in National Parks and other reservations under Government control. This change will assure the effective protection of Government timber regardless of location.

Land Classification. Apparent decrease \$4,500; actual decrease \$5,300, as follows:

(a) Increase of \$1,000 as follows:

(1) \$760 under Classification Act.

(2) \$240 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$5,300.

Equipment and supplies. Actual decrease of \$20,000.



Forest Products. Apparent decrease \$14,976; actual decrease \$17,216 as follows:

(a) Increase of \$2,240 as follows:

- (1) \$1,780 under Classification Act.
- (2) \$460 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$17,216.

Range investigations. Apparent increase \$1,020, as follows:

(a) \$620 under Classification Act.

(b) \$400 to provide for increase of compensation (\$240 bonus).

Silvicultural investigations. Apparent increase \$2,420, as follows:

(a) \$2,180 under Classification Act.

(b) \$240 to provide for increase of compensation (\$240 bonus).

Reconnaissance. Actual decrease of \$5,000.

Miscellaneous forest investigations. Apparent increase \$2,520; actual decrease \$700, as follows:

(a) Increase of \$3220 as follows:

- (1) \$1,540 under Classification Act.
- (2) \$1,680 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$700.



Improvement of the national forests. Actual decrease of \$28,000.

The language of the item has been amended by inserting the following proviso:

"Provided, That where in the opinion of the Secretary of Agriculture, direct purchase will be more economical than construction, telephone lines, cabins, fences, and other improvements may be purchased."

It occasionally happens that telephone lines, fences, or stock water improvements constructed by private parties are abandoned or wrecked, after having served the purpose of the owner. It is often necessary to replace such improvements with new construction from Government funds for National Forest purposes. Authority is now granted to purchase buildings and it is desired to be able to effect similar economies in connection with telephone lines and other improvements where possible. When improvements other than buildings have served the purposes of their private owners there is now no authority of law for their purchase from Government funds, and in many cases they are dismantled and the materials salvaged by the private owners. Such improvements when needed for National Forest purposes could ordinarily be purchased at a materially less cost than would be required in new construction of identical improvements by the Government.

THE HISTORY OF THE UNITED STATES OF AMERICA

FROM THE FOUNDATION OF THE COLONIES TO THE PRESENT TIME

BY JAMES M. SMITH

THE HISTORY OF THE UNITED STATES OF AMERICA, FROM THE FOUNDATION OF THE COLONIES TO THE PRESENT TIME, BY JAMES M. SMITH. This work is a comprehensive history of the United States, covering the period from the first settlement of the colonies to the present day. It is written in a clear and concise style, and is suitable for use as a textbook in schools and colleges. The author, James M. Smith, is a well-known historian and author, and his work is highly regarded. The book is divided into several volumes, and this is the first of them. It contains a detailed account of the early years of the colonies, and the struggles of the people to establish a new government. It also covers the period of the American Revolution, and the formation of the United States. The book is a valuable work for anyone interested in the history of the United States.

BUREAU OF CHEMISTRY

Statutory salaries. Apparent increase \$31,030; actual decrease \$11,352 as follows:

(a) Increase of \$42,382 as follows:

- (1) \$5,854 under Classification Act.
- (2) \$36,528 for increase of compensation (\$240 bonus).

(b) Actual decrease of \$11,352.

(Lump-sum items)

Investigations of agricultural chemistry. Apparent increase \$27,700; actual increase \$17,120 as follows:

(a) \$5,840 under Classification Act.

(b) \$4,740 to provide for increase of compensation (\$240 bonus).

(c) \$17,120 for investigations in the application of chemistry.

Limited investigations in the application of chemistry to agriculture have indicated great economic possibilities, and the increase recommended will permit an extension of investigations along two fundamental lines which may be broadly designated as (1) research agricultural chemistry, and (2) technological agricultural chemistry.

The researches in agricultural chemistry include basic investigations involved in securing information on the chemical composition of food plants, which becomes especially important in view of recent discoveries with respect to the mineral constituents of such plants and their relation to diet and health; studies of the proteins and vitamins in feeding stuffs; investigations of the effect of environmental factors, such as soil, climate, rainfall, fertilizer, and the like on plant composition, the quantity and quality of oils that may be obtained from various vegetable products, and other chemical studies, all having for their primary object the discovery of new facts and relations regarding farm crops that will extend present knowledge of how to cultivate and utilize such products to a greater extent than ever before.

THE HISTORY OF THE

REIGN OF THE EMPEROR OF THE ROMAN EMPIRE

FROM THE DEATH OF THE EMPEROR

TO THE DEATH OF THE EMPEROR

OF THE ROMAN EMPIRE

BY

JOHN BISHOP, ESQ.

LONDON: Printed by J. B. ALLEN, at the

PRINTING OFFICE, No. 10, ST. MARTIN'S LANE.

1794.

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The technological investigations will have for their object the development, through the application of chemical principles of methods for the manufacture of agricultural products, including the creation of new uses for such products, having in view the more complete utilization of wastes and surpluses. Provision for the utilization of surplus crops must be made in advance. It is not practicable to develop profitable methods extemporaneously when a big crop is already on hand. It is highly important to determine by experimental work in advance what is and what is not practicable. It is planned to extend the work, for instance, on the utilization of the sweet potato through the manufacture of potato flour which, because of its high diastatic power, can be used to good advantage as an adjunct in baking. It is believed that large quantities of cull and surplus sweet potatoes which now are a total loss can be used profitably in this way. Another technological problem whose solution promises to yield profitable returns is the utilization of surplus corn and potatoes and other starch yielding products through the conversion of starch into maltose sugar, a product for which there is an extensive market and which can be used for many of the purposes for which cane sugar is now used. The great economic value to the country of utilizing surplus corn and potatoes to replace a part of the imported cane sugar is obvious and indicates the need for a complete study of the greater utilization of carbohydrates by converting them into saccharine products. A more adequate study of the profitable utilization of vegetable oils and of developing proper methods for the manufacture of fruit concentrates should also be undertaken.

Collaboration with other Departments. Apparent increase \$90; actual decrease \$730 as follows:

(a) Increase of \$320 as follows:

- (1) \$340 under Classification Act.
- (2) \$480 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$730.



Color Investigations. Apparent decrease \$455; actual decrease \$4,857, as follows:

(a) Increase of \$4,402, as follows:

- (1) \$1,602 under Classification Act.
- (2) \$2,800 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$4,857.

Sirup and sugar investigations. Apparent decrease \$1,630; actual decrease \$5,450, as follows:

(a) Increase of \$3,820 as follows:

- (1) \$1,920 under Classification Act.
- (2) \$1,900 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$5,450.

Enforcement of the food and drugs act. Apparent increase \$11,859; actual decrease \$10,101, as follows:

(a) Increase of \$21,960 as follows:

- (1) \$12,480 under Classification Act.
- (2) \$9,480 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$10,101.

Enforcement of the Tea Importation Act. Apparent decrease of \$1,890; actual decrease \$3,050, as follows:

(a) Increase of \$1,160 as follows:

- (1) \$200 under Classification Act.
- (2) \$960 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$3,050.



Naval stores investigations. Apparent increase \$600; actual decrease \$340 as follows:

(a) Increase of \$940 as follows:

- (1) \$220 under Classification Act.
- (2) \$720 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$340.

Insecticide and Fungicide investigations. Apparent increase of \$9,440; actual increase \$6,920, as follows:

(a) \$1,080 under Classification Act.

(b) \$1,440 to provide for increase of compensation (\$240 bonus).

(c) \$6,920 for insecticide and fungicide investigations, etc.

The primary purpose of this work is to devise cheap and effective methods of preparing insecticides and fungicides. This will involve a study of the chemical and physical properties of various commercial insecticides and fungicides, their keeping and the burning qualities, and commercial methods of manufacture.

Investigations will be made of the possibility of preparing calcium arsenate directly from certain ores. If this can be done, all the expense of refining white arsenic and oxidizing it to arsenic acid will be obviated, and calcium arsenate so prepared can be sold at a fraction of the cost of the present commercial product. It is also planned to make a study of the chemical composition and insecticidal action of plant constituents and synthetic chemicals, with a view to find substitutes for insecticides now in use and to develop new and more potent insecticides; also to determine what plants possess insecticidal properties, to isolate and study the active principles of such plants, and to investigate methods for the synthetic preparation of active ingredients found to be present in plants.



There are probably many organic compounds which are suitable for insecticidal, fungicidal, and disinfective use that can be prepared at a comparatively small cost. This is a virgin field, however, in which very little work has yet been done. The effect of the continuous use of arsenicals upon the composition of the soil and the chemical composition of the crops grown upon such soil should also be studied.

Drying of fruits and vegetables. Apparent decrease \$1,455; actual decrease \$1,655 as follows:

(a) Increase of \$200 under Classification Act.

(b) Actual decrease of \$1,655.

Plant dust explosions and fires. Apparent increase \$1,555; actual decrease \$1,685 as follows:

(a) Increase of \$3,240 as follows:

(1) \$1,360 under Classification Act.

(2) \$1,880 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$1,685.

Enforcement of the Naval Stores Act. Actual increase \$10,000. This is a new item. The widespread and rather universal practice of adulterating turpentine with kerosene and other mineral oils was largely responsible for the enactment by a number of States of turpentine and paint laws. Such laws, however, while benefiting the particular States concerned, are of course inapplicable to interstate or foreign commerce in the adulterated product. This circumstance and the fact that rosins were likewise being misgraded in an effort to sell an inferior product at a price greatly in excess of its true value, lead to the enactment of the Federal

Naval Stores Act of March 3, 1923, the provisions of which became effective June 3, last. This Act is designed to prevent and punish deceptions in transactions involving naval stores entering into interstate and foreign commerce.

Turpentine and rosin are produced in the South from North Carolina to Texas. The annual value of the products of the industry is estimated at from thirty to forty millions of dollars. The entire product goes into interstate or foreign commerce. Rosin is shipped only in 500-lb. barrels while turpentine is shipped in tank cars and also in 50-gallon barrels, and under the terms of the Act each car and barrel must be graded and tested for purity.

The Naval Stores Act of March 3, 1923, imposed upon the Department the obligation of carrying its provisions into effect but made no appropriation for the purpose. The \$10,000 in the estimates will be used for the salaries and traveling expenses of three technical men (inspectors and chemists), and for equipment, chemicals, and supplies. Under authority of Section 4 of the Act it is estimated that approximately \$2,500 will be collected from the trade as fees for the issuance of certificates of purity and grade, and covered into the Treasury as miscellaneous receipts.



BUREAU OF SOILS

Statutory salaries. Apparent increase of \$13,560; actual decrease \$3,700 as follows:

(a) Increase of \$17,260 as follows:

- (1) \$3,560 under Classification Act.
- (2) \$13,680 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$3,700.

(Lump-sum items)

Chemical investigations. Apparent increase \$2,530 as follows:

- (a) \$1,070 under Classification Act.
- (b) \$1,460 to provide for increase of compensation (\$240 bonus).

Physical investigations. Apparent increase \$920 as follows:

- (a) \$200 under Classification Act.
- (b) \$720 to provide for increase of compensation (\$240 bonus).

Investigations of fertilizer resources. Apparent increase of \$3,595; actual decrease \$2,135 as follows:

- (a) Increase of \$5,730 as follows:
 - (1) \$2,150 under Classification Act.
 - (2) \$3,580 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$2,135.



Soil survey investigations. Apparent increase \$11,510; actual decrease \$14,950 as follows:

(a) Increase of \$26,460 as follows:

- (1) \$14,460 under Classification Act.
- (2) \$12,000 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$14,950.

Classification of agricultural lands. Apparent increase \$510; actual decrease \$1,250 as follows:

(a) Increase of \$1,760 as follows:

- (1) \$560 under Classification Act.
- (2) \$1,200 to provide for increase of Compensation (\$240 bonus).

(b) Actual decrease of \$1,250.



BUREAU OF ENTOMOLOGY.

Statutory salaries. Apparent increase \$13,853; actual decrease \$7,500 as follows:

(a) Increase of \$21,353 as follows:

- (1) \$4,846 under Classification Act.
- (2) \$16,512 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$7,500.

(Lump-sum items)

Deciduous Fruit Insects. Apparent increase of \$59,420; actual increase \$57,630 as follows:

(a) \$1,310 under Classification Act.

(b) \$480 to provide for increase of compensation (\$240 bonus).

(c) \$57,630 for Japanese beetle control. The Japanese beetle continues to spread at an alarming rate, and the losses occasioned through the depredations of this pest are becoming more and more serious. The funds requested are necessary in order to extend the inspection and certification of nursery stock grown within the quarantined area, and to strengthen the investigational work connected with the project, particularly the search for parasites of the Japanese beetle in Japan, China and India, where this insect or its near relatives are prevalent.

The territory infested in the fall of 1922 comprised approximately 800 square miles. At present about 1600 to 1800 square miles are infested. The infested area, for the most part, is densely populated and includes the cities of Philadelphia and Camden, as well as suburbs of large population. The prevention of spread of the beetle under these conditions is extremely difficult, as the agriculture of the territory consists largely of the growing of fruits, farm and truck crops and nursery stock of various kinds, including greenhouse stock.

The language of the paragraph is recommended changed by adding the following clause:

"Including, when necessary, cooperation with the Federal Horticultural Board, in establishing, maintaining and enforcing quarantines promulgated under the Plant Quarantine Act of August 20, 1912, as amended."

This change in language is desirable in order to provide for necessary cooperation with the Federal Horticultural Board in establishing, maintaining and enforcing quarantines under the Plant Quarantine Act of August 20, 1912, as amended. A quarantine once established to be of any practical value must be rigidly maintained and enforced. Employees of the Bureau of Entomology necessarily in the quarantined areas in connection with the investigational work can lend considerable assistance to plant quarantine inspectors in the maintenance and enforcement of quarantines.

Cereal and forage insects. Apparent increase \$1,400 as follows:

(a) \$1,020 under Classification Act.

(b) \$330 to provide for increase of compensation (\$240 bonus).

Southern field crop insects. Apparent decrease \$3,030; actual decrease \$4,950 as follows:

(a) Increase of \$1,920, as follows:

- (1) \$480 under Classification Act.
- (2) \$1,440 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$4,950.

Forest insects. Apparent increase \$2,100, as follows:

(a) \$1,140 under Classification Act.

(b) \$960 to provide for increase of compensation (\$240 bonus).

Truck crop and stored product insects. Apparent increase \$2,000; actual decrease \$710 as follows:

(a) Increase of \$2,710, as follows:

- (1) \$1,030 under Classification Act.
- (2) \$1,680 to provide for increase of compensation (\$240 bonus).

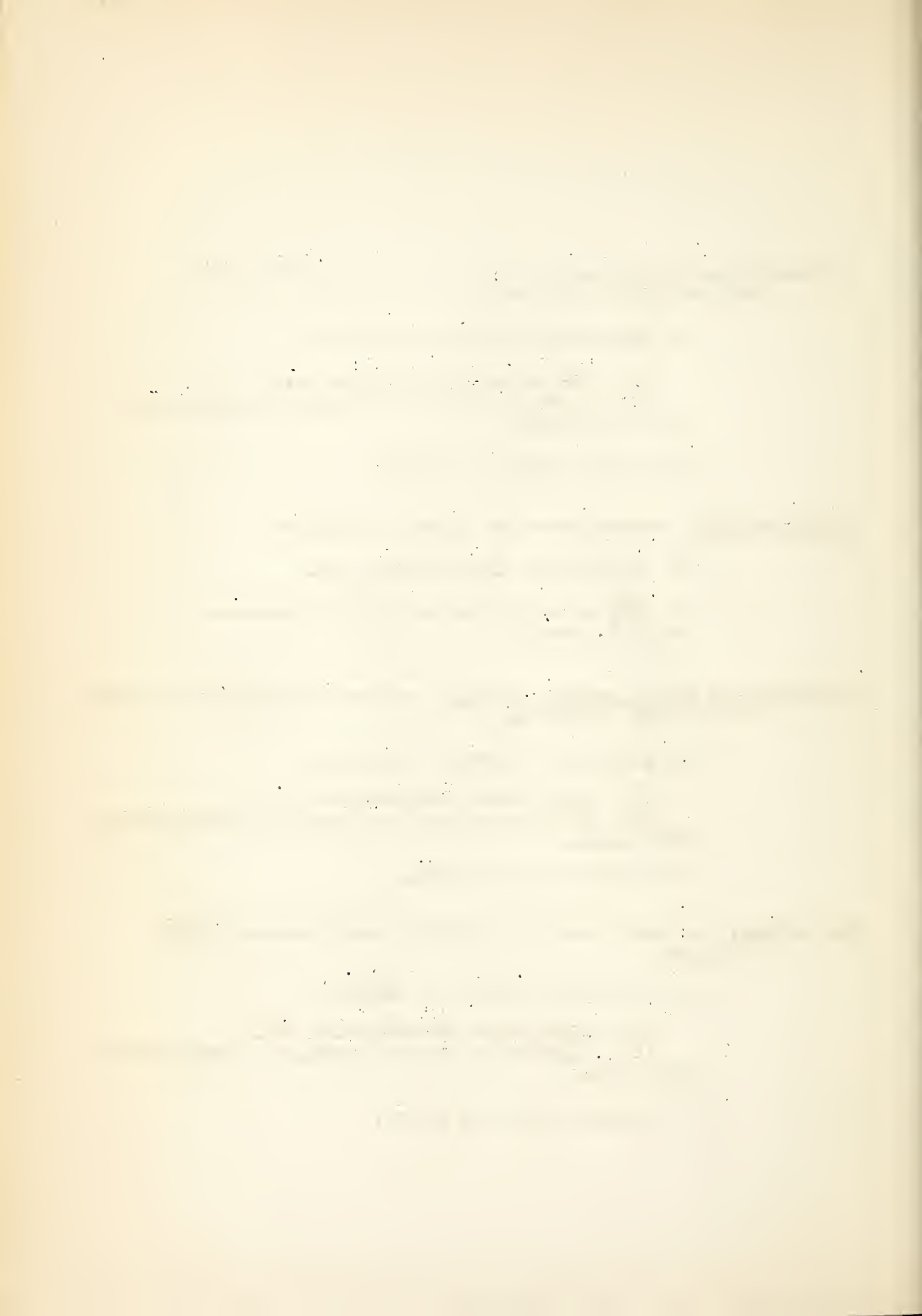
(b) Actual decrease of \$710.

Bee culture. Apparent decrease of \$1,480; actual decrease \$3,970 as follows:

(a) Increase of \$2,490, as follows:

- (1) \$1,360 under Classification Act.
- (2) \$1,130 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$3,970.



Tropical and subtropical fruit insects. Apparent decrease of \$3,445;
actual decrease of \$4,675 as follows:

(a) Increase of \$1,230 as follows:

- (1) \$750 under Classification Act.
- (2) \$480 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$4,675.

Miscellaneous insects. Apparent increase \$2,300 as follows:

(a) \$1,340 under Classification Act.

(b) \$960 to provide for increase of compensation (\$240 bonus).

Preventing spread of moths. Apparent increase of \$1,060; actual decrease \$300, as follows:

(a) Increase of \$1,360 as follows:

- (1) \$160 under Classification Act.
- (2) \$1,200 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$300.



Preventing spread of European corn-borer. Apparent decrease of \$8,650; actual decrease \$10,320 as follows:

(a) Increase of \$1,670 as follows:

- (1) \$970 under Classification Act.
- (2) \$700 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$10,320.

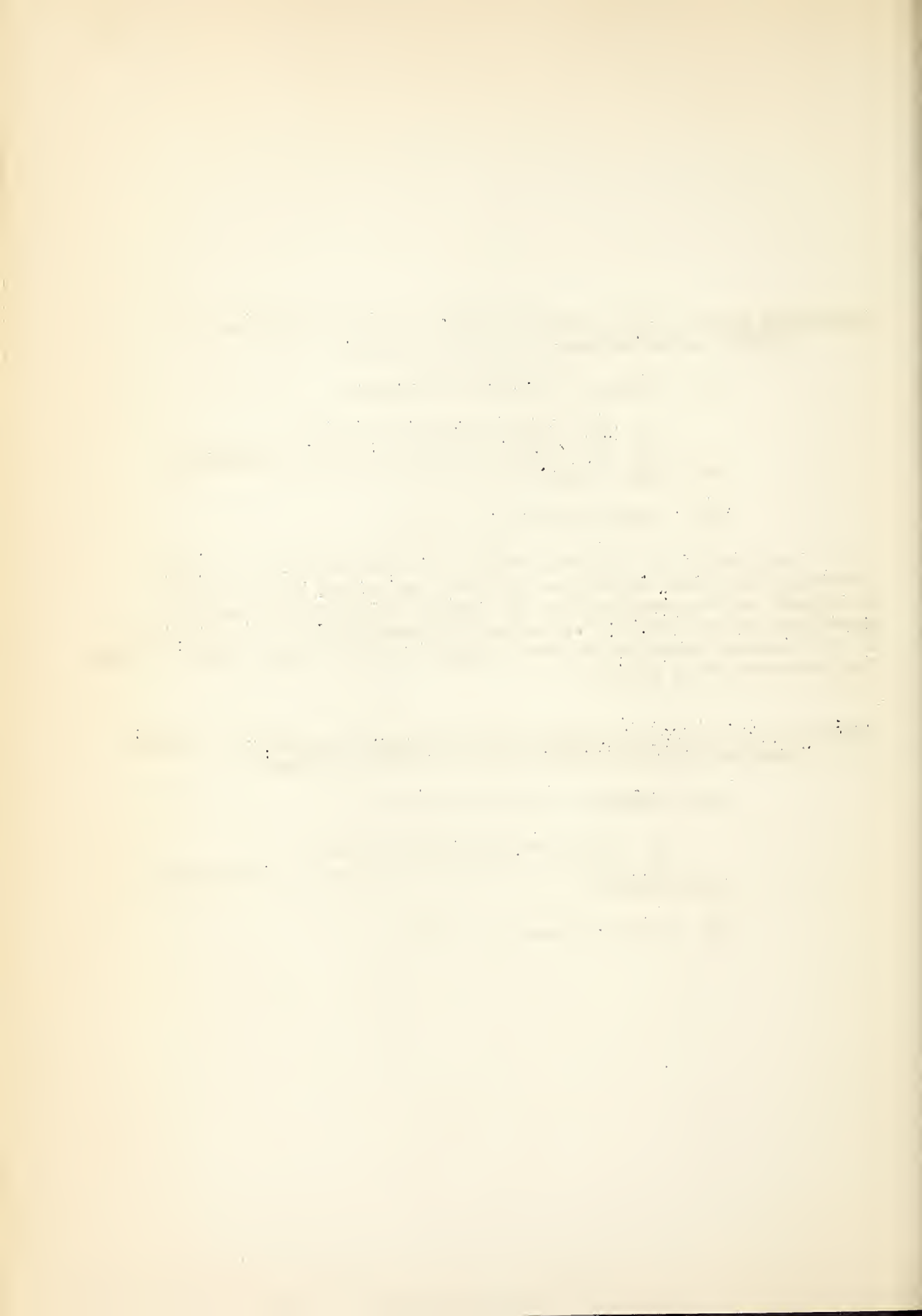
The language of the item has been amended so as to authorize investigational work as well as measures for control and prevention of spread, and cooperation with the Federal Horticultural Board in establishing, maintaining, and enforcing quarantines. The desirability of this latter change is the same as explained in the note under the item for deciduous fruit insects.

Control and prevention of spread of the Mexican bean beetle. Apparent decrease \$1,895; actual decrease \$2,195 as follows:

(a) Increase of \$300 as follows:

- (1) \$60 under Classification Act.
- (2) \$240 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$2,195.



BUREAU OF BIOLOGICAL SURVEY

Statutory salaries. Apparent increase \$11,550; actual decrease \$4,628 as follows:

- (a) Increase of \$16,178 as follows:
 - (1) \$3,266 under Classification Act.
 - (2) \$12,912 to provide for increase of compensation (\$240 bonus).
- (b) Actual decrease of \$4,628.

(Lump-sum items)

Maintenance of Mammal and Bird Reservations. Apparent increase of \$500, as follows:

- (a) \$260 under Classification Act.
- (b) \$240 to provide for increase of compensation (\$240 bonus).

Food habits of birds and animals. Apparent decrease of \$4,080; actual decrease \$10,720 as follows:

- (a) Increase of \$6,640 as follows:
 - (1) \$3,760 under Classification Act.
 - (2) \$2,880 to provide for increase of compensation (\$240 bonus).
- (b) Actual decrease of \$10,720.



Biological investigations. Apparent increase of \$4,075; actual increase \$1,995 as follows:

(a) \$1,840 under Classification Act.

(b) \$240 to provide for increase of compensation (\$240 bonus).

(c) \$1,995 for biological investigations. The work of the Bureau of Biological Survey was originally scientific along the lines at present covered by the activities of the division of biological investigations. The economic activities of the Bureau have been the direct outgrowth of these scientific investigations, and the demand for research work has increased correspondingly with the growth of the economic work. Innumerable problems in relation to the conservation and increase of the Nation's wild life are in need of prompt investigation to furnish a basis for controlling harmful species and increasing the supply of useful species. The recommended increase is needed for extension of the research investigations of the bureau in order that this phase of the work, which is fundamental may keep pace with the economic work, in order that the present effectiveness of the latter may likewise be maintained.

Protection of migratory birds. Apparent increase \$925; actual decrease \$3,000, as follows:

(a) Increase of \$3,925, as follows:

(1) \$3,205 under Classification Act.

(2) \$720 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$3,000.

Reindeer and fur-bearers in Alaska. Actual decrease of \$4,165.

Administrative expenses. Apparent increase of \$700 under Classification Act.

The first part of the paper discusses the importance of the study of the history of the United States. It is argued that a knowledge of the past is essential for a full understanding of the present. The author then goes on to discuss the various factors that have shaped the development of the United States, including the role of the government, the economy, and the culture.

In the second part of the paper, the author discusses the role of the government in the development of the United States. It is argued that the government has played a central role in the development of the country, and that its actions have shaped the course of history. The author then goes on to discuss the various policies that the government has implemented, and the impact that these policies have had on the country.

The third part of the paper discusses the role of the economy in the development of the United States. It is argued that the economy has played a central role in the development of the country, and that its growth has been a key factor in the country's success. The author then goes on to discuss the various factors that have contributed to the growth of the economy, including the role of technology, the labor force, and the government.

Finally, the author discusses the role of the culture in the development of the United States. It is argued that the culture has played a central role in the development of the country, and that its values and beliefs have shaped the course of history. The author then goes on to discuss the various factors that have contributed to the development of the culture, including the role of the media, the arts, and the education system.

DIVISION OF ACCOUNTS AND DISBURSEMENTS

Statutory salaries. Apparent increase \$15,020; actual increase \$5,600 as follows:

(a) \$1,820 under Classification Act.

(b) \$9,600 to provide for increase of compensation (\$240 bonus).

(c) Actual increase of \$3,600. The work of the Division of Accounts and Disbursements is seriously handicapped through the lack of sufficient trained personnel. Temporary details of employees from the various bureaus of the Department are made from time to time in an effort to keep the work current, but this arrangement is wholly unsatisfactory. The Division is charged with important duties. In addition to the general accounting and disbursing work of the Department which is heavier now than at any time in the history of the Department, it prepares important financial statements for Congress, Members of Congress, outside organizations, and individuals, and budgetary information for the Bureau of the Budget; maintains the Departmental record of deductions from salaries of employees within the provisions of the retirement act of May 22, 1920, and the central record of classified expenditures. To promptly and efficiently handle this volume of work the personnel must be kept up to the highest possible standard. This is impossible under present conditions. The necessity of constantly training the employees detailed to assist in the work requires a considerable portion of the time of trained employees, and hardly does an employee become trained until he is substituted by another inexperienced person as the detailed employees consist largely of temporary appointees. The increase recommended will permit the replacement of temporary employees by permanent ones.



LIBRARY, DEPARTMENT OF AGRICULTURE

Statutory salaries: Apparent increase, \$7,340; actual decrease, \$2,720,
as follows:

(a) Increase of \$10,060 as follows:

- (1) \$3,340 under Classification Act
- (2) \$6,720 to provide for increase of compensation
(\$240 bonus).

(b) Actual decrease of \$2,720.

(Lump-sum item)

General Expenses, Library. Apparent increase of \$960, as follows:

(a) \$240 under Classification Act.

(b) \$720 to provide for increase of compensation
(\$240 bonus).

While there is an apparent increase in this item of \$960, the amount allowed represents actually a decrease of \$1,060. The amount required for the proper allocation of salaries paid from this appropriation is \$2,020; \$1,060 to provide for increases under the Classification Act, and \$960 to provide for the \$240 bonus, while only \$240 and \$720, respectively, were allowed for these purposes. This circumstance will obviously make it necessary to use \$1,060 of the appropriation for the payment of salaries in excess of the amount required during the current fiscal year and will effect a decrease of that amount in the sum available for the purchase of books and periodicals.

BUREAU OF PUBLIC ROADS.

Statutory salaries. Apparent increase of \$17,380; actual decrease \$4,612, as follows:

(a) Increase of \$21,392 as follows:

- (1) \$2,024 under Classification Act.
- (2) \$19,968 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$4,612.

(Lump-sum items)

Road management. Apparent decrease \$950; actual decrease \$4,610 as follows:

(a) Increase of \$3,660 as follows:

- (1) \$660 under Classification Act.
- (2) \$3,000 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$4,610.

Road building and maintenance. Apparent decrease \$3,360; actual decrease \$7,830 as follows:

(a) Increase of \$4,520 as follows:

- (1) \$1,520 under Classification Act.
- (2) \$3,000 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$7,830.

Farm Irrigation. Apparent increase \$280, as follows:

- (a) \$40 under Classification Act.
- (b) \$240 to provide for increase of compensation (\$240 bonus).

Farm drainage. Apparent increase \$1,110, as follows:

- (a) \$660 under Classification Act.
- (b) \$450 to provide for increase of compensation (\$240 bonus).

Rural engineering. Apparent increase \$10,000; actual increase \$7,700 as follows:

- (a) \$1,000 under Classification Act.
- (b) \$1,300 to provide for increase of compensation (\$240 bonus).

(c) \$7,700 rural engineering investigations. This is a line of work that has been seriously neglected. The appropriations for the investigation of agricultural engineering problems are less now than during the pre-war period. The studies of cost of production of agricultural crops is one of the fundamental questions now before the Department of Agriculture. Farm power, equipment, drainage, and irrigation all have a tremendous bearing upon cost of production, and these are in large measure problems of agricultural engineering. The demand for research work of this character coming from colleges, universities, and many prominent organizations representing agricultural interests, is far beyond the ability of the Department to meet with its present facilities, although practically all service and extension work has been abandoned in order that the personnel employed under this appropriation might concentrate its energies on the purely research features of the work.

The results that may be expected under this item will be of immediate practical value to farmers. The amount of money that is being annually expended by the agricultural class for farm machinery, farm buildings, and equipment amounts to an enormous total. Many machines are purchased that are found ill adapted to the type of service required. Many structures are erected that prove to be



unsuitable or inadequate for the purpose designed and entail great losses. Farmers are not buying the same amount of farm machinery as in previous years. The result is that their machinery is becoming depleted, but before replacements are made they should have many problems worked out and accurate information available. The loss in tractors alone in the past three years, through the purchase of unsuitable types, would represent a vast sum. It is proposed, if this increase is granted, to carry on research projects in cooperation with the land-grant colleges or other educational institutions which have established divisions of agricultural engineering, so that not only will the Department funds be augmented by State funds, but the facilities of personnel, laboratories, and equipment available in the States will be utilized for such work. Thus, a real stimulus will be given the work in the States.

Surplus war explosives. Actual decrease \$15,000. At the present time the cost of preparing and distributing these explosives is paid from the general expense item of \$15,000 which is appropriated for that purpose and a charge of 1/4 cent per pound is made against the receiving agency to reimburse the Federal government for this cost of distribution. The moneys thus collected are deposited in the miscellaneous receipts fund of the Treasury and practically offset the appropriation of \$15,000. It is the opinion of the Department that the expenses of preparing and distributing the explosives should be paid from the administrative fund provided by the Federal Aid Road instead of from a specific appropriation under the general expense fund of the Bureau of Public Roads and that the cost of preparing and distributing the explosives should be reimbursed to the Federal Aid Road administrative fund by all agencies receiving the explosives.

In order to accomplish this purpose it is proposed to change the language of the surplus war explosives paragraph as follows:

"The Secretary of Agriculture is hereby authorized to expend out of the administrative fund provided by the Federal Aid Road Act of July 11, 1916, as amended, such sum or sums as may be necessary for supervising the preparation, distribution, and use of picric acid, trinitrotoluol, trojan powder, and such other surplus war



explosives as may be made available for use in clearing stumps and stones from agricultural land, independently or in cooperation with agricultural colleges and other agencies, and for investigating and reporting upon the results obtained from the use of the explosives; Provided, That any amount so paid from said fund shall be reimbursed thereto by such charge to other Federal agencies, Agricultural Colleges, or other agencies to which the explosives are distributed."

Administrative expenses. Actual decrease of \$1,065.



BUREAU OF AGRICULTURAL ECONOMICS

Statutory salaries. Apparent increase \$122,643; actual decrease \$34,683, as follows:

(a) Increase of \$159,806 as follows:

- (1) \$24,994 under Classification Act.
- (2) \$134,812 to provide for increase of compensation (\$240 bonus).

(b) Decrease of \$37,163 as follows:

- (1) \$2,480 by transfer of two clerks at \$1,000 each, with increase of compensation at the rate of \$240 per annum in each case to the statutory roll, Office of Editorial and Distribution Work.
- (2) Actual decrease of \$34,683.

(Lump-sum items)

General administrative expenses. Apparent increase \$1,660, as follows:

- (a) \$460 under Classification Act.
- (b) \$1,200 to provide for increase of compensation (\$240 bonus).

Farm Management and Practice. Apparent increase \$4,551; actual decrease \$9,829 as follows:

(a) Increase of \$14,380 as follows:

- (1) \$4,080 under Classification Act.
- (2) \$10,300 to provide for increase of compensation (\$240 bonus)

(b) Actual decrease of \$9,829.



Marketing and distributing farm products. Apparent increase \$24,623 as follows:

- (a) \$7,360 under Classification Act.
- (b) \$17,268 to provide for increase of compensation (\$240 bonus).

Crop and live stock estimates. Apparent increase \$18,990; actual increase \$6,030 as follows:

- (a) \$3,600 under Classification Act.
- (b) \$9,360 to provide for increase of compensation (\$240 bonus).
- (c) \$5,030 for foreign competition and demand. This increase is necessary in order to provide for a slight expansion of the foreign crop reporting service.

It is highly desirable to develop a world crop reporting system, collect information as to the demand for agricultural products, and make a thorough study of the problems that arise in the field of foreign competition and demand. With available funds it has been possible only to maintain a skeleton organization under this project. In order to make the work effective it will be necessary both to expand and to intensify it. It is planned to extend the present agricultural survey of Europe to include a survey of world agriculture in those branches and countries where such a survey may prove of practical importance to the American farmers. American agricultural interests are greatly in need of authentic information regarding crop and market conditions abroad. To supply this need it will be essential to establish a world crop reporting service analogous to that now rendered by the division of crop and live stock estimates covering the United States. It is proposed to build up this service around that rendered by the International Institute of Agriculture, taking advantage of the cooperative contacts that it may be possible to arrange with the consuls of the Department of State and the attaches of the Department of Commerce, supplemented in essential details by the existing special organization of the Department of Agriculture located abroad.

Market inspection of perishable foods. Apparent increase \$3,000;
actual decrease \$1,020 as follows:

(a) Increase of \$4,020 as follows:

- (1) \$1,140 under Classification Act.
- (2) \$2,880 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$1,020.

Market News Service. Apparent decrease \$17,520; actual decrease
\$26,100, as follows:

(a) Increase of \$8,580 as follows:

- (1) \$2,820 under Classification Act.
- (2) \$5,760 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$26,100.

Enforcement of the United States Cotton Futures Act and United States
Cotton Standards Act. Apparent increase of \$9,990, as follows:

(a) \$2,070 under Classification Act.

(b) \$7,920 to provide for increase of compensation (\$240 bonus).

The work required under the Cotton Standards Act and under the Cotton Futures Act overlap in so many respects that the two Acts can be administered more advantageously under one appropriation. The language of the item for enforcing the Cotton Futures Act has therefore been amended with this end in view.

Enforcement of the United States Grain Standards Act. Apparent increase \$8,777; actual increase \$7,597, as follows:

(a) \$220 under Classification Act.

(b) \$960 to provide for increase of compensation (\$240 bonus).

(c) \$7,597 for enforcement of the United States Grain Standards Act. This additional sum is necessary in order to supervise properly inspections of rye, standards for this grain having been made effective during the present fiscal year. This slight increase is needed also to meet the general increased demand for supervision work. During the fiscal year 1923 four offices of Federal Grain Supervision were closed because of insufficient funds, although serious objection was made by the grain trade in the cities affected.

Administration of the United States Warehouse Act. Apparent increase \$26,600; actual increase \$25,280, as follows:

(a) \$360 under Classification Act.

(b) \$960 to provide for increase of compensation (\$240 bonus).

(c) \$25,280 for administration of the United States Warehouse Act. A material increase will be necessary in the appropriation for the administration of the Warehouse Act to cover the additional work placed upon the Department as a result of amendments to the Act by the last Congress. Formerly the act covered only a limited number of products, i. e. cotton, wool, grain, and tobacco. As amended its scope is extended to any agricultural products that may be deemed suitable for storage under the terms of the Act. The Department has received applications from such organizations as the Cane Growers' Cooperative Association of Georgia and the Peanut Growers' Association of Georgia for licenses under the Warehouse Act, and inquiries on the subject have come from the Potato Growers'

Association in Maine and a number of fruit canning concerns in Michigan, Wisconsin, and California. Much interest has also been manifested in the possibilities and advantages of the amended Act on the part of those storing dried fruits, as well as by the cold storage industry. This means that many legitimate demands for participation in the benefits of the Act may be expected. To meet these demands it will be necessary to conduct preliminary investigations of proper methods of storing the particular commodities for which warehouse facilities may be sought, as well as to the establishment of standards for such commodities. This will necessitate the employment of additional specialists and provision for their traveling and other expenses.

The Federal Farm Loan Board, in administering the Agricultural Credits Act, may also be expected to make heavy demands upon the Department for assistance. In fact, it has already served notice to that effect and conferences have been held upon the work.

Completion of Wool Work. Apparent decrease \$710; actual decrease \$1,950 as follows:

(a) Increase of \$1,240 as follows:

(1) \$280 under Classification Act.

(2) \$960 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$1,950.

BUREAU OF HOME ECONOMICS.

Statutory salaries. Apparent increase \$5,484; actual decrease \$1,340, as follows:

(a) Increase of \$11,944 as follows:

- (1) \$1,204 under Classification Act.
- (2) \$5,280 to provide for increase of compensation (\$240 bonus).
- (3) \$5,460 to provide for two clerks, class 2, one clerk at \$1,100, and one messenger boy, \$600 with increase of compensation at the rate of \$240 per annum in each case transferred from the statutory roll, Extension Service.

(b) Decrease of \$6,460, as follows:

- (1) \$5,120 by transfer of one clerk at \$1,320, one clerk at \$1,260, with increase of compensation at the rate of \$240 per annum in each case, to the statutory roll, Extension Service; one clerk at \$1,100, one charwoman at \$480, with increase of compensation at the rate of \$240 per annum in each case, to the statutory roll, Office of the Secretary.
- (2) Actual decrease of \$1,340.

(Lump-sum items)

General expenses. Apparent increase \$29,780; actual increase \$25,000, as follows:

- (a) \$1,660 under Classification Act.
- (b) \$3,120 to provide for increase of compensation (\$240 bonus).
- (c) \$25,000 as follows:
 - (a) \$11,000 for economic studies, as follows:

(1) Standard of Living Studies. The investigations now under way in cooperation with the Bureau of Agricultural Economics on standards of living should be extended to include different groups in the localities already studied and in localities not yet covered. This will be necessary in order to draw more general conclusions from the data secured. These studies are fundamental. The information obtained will indicate the itemized distribution of the family income under actual conditions, and will serve as a basis for the establishment of standards for home consumption. The results of a detailed study of expenditures under specific items will be useful to other agencies of the Department in working out the consumption demands of the homemaker and should be of value in guiding production. For example, if the average home studied in a particular community is found to use a certain amount of butter or flour per individual, this would furnish a basis for estimating the need for these products in that community, and, if the investigation is sufficiently extended, would eventually form the basis for estimating national needs for certain necessities. Such figures should serve as a guide for production and assist in preventing overproduction and bringing about better distribution of products for home consumption. The study of expenditures will also aid in establishing standards for consumption. These standards will be expressed in cost and amount of things bought and will indicate to the housewife whether or not she is getting a fair return for her expenditures for a particular purpose or object.

(2) Study of Wages for Household Tasks. There is much discussion of the value of the woman's work in the home, and a great deal has been said of her contribution that is intangible and can not be given a monetary value. It is desirable to know, on a wage basis, the contribution that a woman makes to the home income in doing the various household tasks. These figures will be of value in estimating the real income under which the family is operating; will serve to bring about a greater appreciation of the value of the woman's work in the home; and, where there is a choice of work, will enable the women to use her time to the best advantage. The fairly simply question of home sewing may be taken as an example. By keeping an accurate account of time and materials used in home sewing, it will be possible to estimate the wage earned per hour for garments of different types. This will vary



with the same worker from about six cents an hour in the case of children's rompers to from \$2 to \$3 in the case of an afternoon or evening dress, depending upon the degree of specialization of the garment and the training of the worker. Such figures are needed to guide the housewife in the choice of work and in the type of training she would demand. Similar figures for other lines of household activity are necessary if the work of the home is to be established on a business basis.

(3) Study of Factors Entering into Clothing Costs. A large proportion of the family income is spent on clothing. The wide variations in clothing cost can not be accounted for on the basis of materials and labor used. A more detailed study of the factors which enter into these costs should furnish information which will serve as a guide for women in determining clothing standards and expenditures. Such a study would be of further value in furnishing information which would make it possible for women, through more intelligent choice of clothing, to help stabilize and standardize the clothing industry. If women's clothing were better standardized, that part of clothing cost which is the result of seasonal labor and the risk of fashion could be eliminated.

(4) Study of Economic Uses of Food. There should be a continuation and expansion of the studies of the economic uses of food. The housewife is being approached from all sides by persons or agencies urging that food consumption along certain lines be increased. Particularly is present day advertising bringing this appeal. Sometimes the argument is advanced that gain will result to the individual consuming the food; in some cases consumption is urged with a view to further general economic gain; and in a few cases it is urged for the economic advantage of a special group of producers or dealers. So far as is possible, food standards should be set up in terms of food groups which would help the housewife in maintaining more definite food standards and in meeting economic situations without sacrificing the health of the family group.

In order to set up these standards in definite form, detailed experiments extending over a considerable period of time should be conducted. Such experiments would show the proportion of the diet which may be safely chosen from certain food groups when used in definite combination with other food groups. These data would be of great value in times of surplus or failure of any of the more important foods in determining the



changes necessary in the diet in order to adjust it to such abnormal condition without a sacrifice of health. They should also show the limits "within which such variations are safe.

(5) Study of the Cost of Housing. The cost of housing has increased relatively more than any other element in the household budget. Household budgets prepared before 1918 are of little value in indicating the proportion of the income which may be legitimately spent for housing. These budgets estimates need to be readjusted in the light of the present housing situation. A study should be made of rent figures and of costs of building so as to determine the sum which is necessary to provide adequate housing for the family. More definite information as to the relation of this cost to running expenses in terms of materials and labor is also needed.

(b) \$8,960 for textile and clothing experiments as follows:

(1) Durability of Household Textiles. Laboratory studies should be made of the various factors affecting the wear of textiles. Very little information is now available to the housewife which will help her in choosing textile materials which will give the greatest amount of service. The tensile strength of the most commonly used textile fibers is known in a general way. These fibers pass through many processes in being manufactured into the fabric. To meet the demand for cheaper clothing, fibers of lower grade or even a cheaper fiber may be substituted, or a light-weight fabric may be treated with a foreign material to make it seem heavier than it really is. There has been little study of the effect of these processes and substitutions on the wear of the material. Various trade groups consider this subject of sufficient importance to maintain an expert in connection with certain technical bureaus to test their textile materials. The results of these investigations are not adapted to the problems of the housewife and in general are not available to her.

The Department plans to make such tests as may be necessary to furnish the housewife information needed in purchasing textiles so as to enable her to choose her textiles more wisely and protect her from the fraudulent dealer. These studies will consider such problems as the effect of weighting on the wear of silk fabrics; the comparative wear of stockings and underwear made from cotton, silk, and artificial silk;



the effect of an admixture of cotton on the wear and appearance of so-called wool cloth; the effect of mercerizing and bleaching on the wear of cotton and linen, etc.

Tests in the laboratory should be supplemented by properly directed field tests. These tests should be carried out under normal conditions and whenever possible by the housewives themselves so as to educate them in keeping records of trade names, methods of handling, and length of wear which will furnish them bases for forming judgments as to which are the best values and be a guide in future buying. Such records when collected and the data tabulated should furnish information as to the comparative wear of the various textile materials and garments used in the home, to be used as a check on the laboratory tests.

(2) Relation of Clothing to Regulation of Body Heat. There is practically no scientific information available as to the relation of clothing to heat regulation and metabolic changes within the body and the influence it has upon health. There is need for a detailed study of this problem in order to properly guide clothing selection in its relation to health and to put it on a more scientific basis. In connection with these experiments it is proposed to study the influence of weave and fiber on heat regulation and on the elimination of waste through perspiration.

(c) \$5,040 for equipment studies. There are a number of problems in connection with the selection of household equipment about which the Department is constantly being asked for information. These problems need to be studied much more in detail if the housewife is to be furnished with data which will be of real value to her in the selection of this equipment. Looking at this from the point of view of the amount of money that is being invested by the housewife each year in such equipment, it seems very urgent that information be made available which will enable her to make more wise selections. The following problems are among those which need immediate study:

(1) Heating the House. A problem in the detached house is efficient heating. The material available on the operating principles and the comparative efficiency of various types of heating equipment should be compiled and made available to the housewife. Special studies should be made under household conditions of the comparative cost of operation of these in terms of fuel and labor.



(2) Hot Water Heaters. A requirement for efficient house-keeping is an abundant and readily available supply of hot water. The devices for supplying hot water vary considerably in convenience and efficiency. These should be studied and the information about them compiled so that the housewife may select them more intelligently and know how they should be installed in the household so as to furnish the maximum efficiency.

(3) Stoves. The results of investigations showing the comparative economy of various types of stoves should be compiled and principles worked out which will guide the housewife in the selection of the stove best adapted to the needs of her household, and show her how it can be most economically used.

(4) Refrigeration. Little exact information is now available as to the degree of efficiency which should be expected of a household refrigerator. As different types of mechanical refrigerators are coming into more general use there should be a study made of their initial cost, cost of upkeep, and efficiency as compared with the iced refrigerator. Such figures can be obtained for commercial plants but none are available for plants of household size and operated under household conditions.

(5) Kitchen Planning and Arrangement of Equipment. There is unquestionably going to be much home building done in the near future. The kitchen needs attention in this program if the labor of women in the home is to be conserved. There should be a study and compilation of the principles of kitchen planning with the idea of issuing as soon as possible a bulletin which will set forth these points in such a way that they will result in better kitchens in any better-homes program that may be inaugurated. No other one element in a better-homes program can do more to eliminate useless labor than well planned kitchens.

(6) Laundry Equipment. The various types of washing machines should be studied from the point of view of their efficiency in cleansing clothing and their effect on the wear of clothing. The latter part of this study would be undertaken in connection with the project "Durability of Household Textiles" and should show the influence of various laundry agents on textile wear.



ENFORCEMENT OF THE INSECTICIDE ACT.

Statutory salaries. Apparent increase of \$5,170; actual decrease \$1,740 as follows:

(a) Increase of \$6,910 as follows:

- (1) \$2,110 under Classification Act.
- (2) \$4,800 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$1,740.

(Lump-sum items).

General expenses. Apparent increase \$15,575; actual increase \$5,095, as follows:

(a) \$7,160 under Classification Act.

(b) \$3,320 to provide for increase of compensation (\$240 bonus).

(c) \$5,095 for enforcement of the Insecticide Act.

It has been three years since any increase has been granted in the appropriation for the enforcement of the Insecticide Act. During this time the insecticide and fungicide industry has experienced a tremendous growth, with a constant increase in the work demanded of the Department in the enforcement of this law--a demand far greater than can be met under the present appropriation, even by the exercise of the most rigid economy in expenditures.

The increase requested will make possible the employment of a medical-bacteriologist and possibly one additional chemist to analyze and test the increased number of disinfectants, insecticides, fungicides and especially boll weevil remedies, appearing on the market, and to make field tests of some of the so-called boll weevil remedies appearing on the market.



FEDERAL HORTICULTURAL BOARD.

Statutory salaries. Apparent increase \$5,860; actual decrease \$2,116 as follows:

- (a) Increase of \$7,976 as follows:
 - (1) \$632 under Classification Act.
 - (2) \$7,344 to provide for increase of compensation (\$240 bonus).
- (b) Actual decrease of \$2116.

(Lump-sum items)

Enforcement of the plant quarantine act. Apparent decrease \$3,830; actual decrease \$11,766, as follows:

- (a) Increase of \$7,936 as follows:
 - (1) \$2,032 under Classification Act.
 - (2) \$5,904 to provide for increase of compensation (\$240 bonus).
- (b) Actual decrease of \$11,766.

Extermination of potato wart. Apparent increase \$110; actual decrease \$430, as follows:

- (a) Increase of \$540 as follows:
 - (1) \$300 under Classification Act.
 - (2) \$240 to provide for increase of compensation (\$240 bonus).
- (b) Actual decrease of \$430.



MISCELLANEOUS ITEMS

Demonstrations on Reclamation Projects. - Apparent decrease \$2,540;
actual decrease \$2,780; as follows:

(a) Increase of \$240 to provide for increase of
compensation (\$240 bonus).

(b) Actual decrease of \$2,780.

Printing and binding "Diseases of the Horse" and "Diseases of Cattle."

This item is omitted as the work authorized will be completed
during the fiscal year 1924; actual decrease of \$200,000.

Cooperation fire protection of forested watersheds of navigable streams.
Apparent increase \$380 under Classification Act.

Acquisition of Additional Forest Lands. ~~Actual increase~~ of \$550,000.

The land purchase program under the Weeks Law as laid down by the National Forest Reservation Commission provides for the purchase of a total area of 7,447,386 acres. To date 2,205,027 acres have been acquired. The program is only 30 per cent. completed. The following is the present status of the work:

	Total acreage to be purchased.	Acreage purchased.	Per cent. completed.	Acreage to be purchased.
White Mt. Region of N.H. and Me.	945,906	440,581	47%	505,325
Southern Appala- chian Region	5,275,827	1,597,592	30%	3,678,235
Ozark Mt. Region of Arkansas	516,456	57,968	11%	458,488
Allegheny Region of Pennsylvania	<u>709,277</u>	<u>108,886</u>	<u>15%</u>	<u>600,391</u>
Total:	7,447,386	2,205,027	30%	5,242,359



It is obvious that the remaining 5,242,359 acres should eventually be purchased. On the basis of present-day values they would cost about \$26,000,000. Their sale value is steadily rising. Each year that purchase is delayed will result in a greater ultimate cost to the Government. On a number of the purchase units the acquisition program is still so far from completion that administration of the acquired lands is not economical. The Government holdings are interspersed with and broken up by private properties in such a way as to render the work of fire protection and general administration exceptionally difficult and expensive. Progress toward solidifying the Government holdings by acquisition of these intervening private properties and thus reducing the administrative cost per acre to a practical and economical figure can be expedited only by increased annual appropriations. From this standpoint a \$1,000,000 appropriation will in the long run be more economical.

With a limited appropriation of \$450,000 the overhead cost of administering the acquisition work is necessarily abnormally high. A minimum organization of men to direct and carry on the work must be maintained. The proportionate cost of administering these purchases under the present \$450,000 appropriation is 28 per cent. The number of examiners, appraisers, surveyors, etc., will naturally have to be increased somewhat with an increased appropriation, but the proportionate total cost of handling \$1,000,000 could be reduced to 17 per cent. One million dollars can be expended more economically than \$450,000.

Aside from the protection of watersheds of important navigable streams, it has become more and more clear that the extension of the National Forests in the denuded regions of the East is an essential part of the reforestation program which the country must undertake. This work has already been too long delayed and the consequences of further delay will be cumulative and result in ultimate economic disaster.

Experiment and demonstrations in livestock production in the cane-sugar and cotton districts of the United States. Actual decrease of \$2,530.

The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is of great importance in the theory of the structure of the atom. The second part of the paper is devoted to a detailed discussion of the problem. It is shown that the problem is of great importance in the theory of the structure of the atom. The third part of the paper is devoted to a detailed discussion of the problem. It is shown that the problem is of great importance in the theory of the structure of the atom.

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The tenth part of the paper is devoted to a detailed discussion of the problem. It is shown that the problem is of great importance in the theory of the structure of the atom. The eleventh part of the paper is devoted to a detailed discussion of the problem. It is shown that the problem is of great importance in the theory of the structure of the atom. The twelfth part of the paper is devoted to a detailed discussion of the problem. It is shown that the problem is of great importance in the theory of the structure of the atom.

Experiments in dairying and live-stock production in semiarid and irrigated districts of the Western United States. Apparent decrease \$1,770; actual decrease \$1,890, as follows:

(a) Increase of \$120 under Classification Act.

(b) Actual decrease of \$1,890.

Passenger-Carrying Vehicles. This item carries no appropriation. It merely limits the amount that may be expended for purchase, maintenance, repair, and operation of motor-propelled and horse-drawn passenger-carrying vehicles outside the District of Columbia from the various lump-sum appropriations of the Department. This limitation has been increased over the amount authorized for 1924 by \$20,000 in order to provide for the maintenance of passenger-carrying vehicles now owned by the Government and for the purchase and maintenance of new vehicles. The manner in which this fund will be expended so far as can be estimated at this time is set forth in the accompanying table.

Successful prosecution of the authorized field activities of the Department is possible only through the use of motor-propelled vehicles. Rental costs at prevailing rates are so high that outright purchase is more economical, and has the additional advantage of having cars on hand as needed, obviating serious delays in attempting to hire cars for the special service and conditions under which such cars are operated in the transaction of the Department's field work.

In order to assure more satisfactory service the language has been changed by omitting the additional limitation on the purchase of new vehicles, although the primary limitation remains unchanged. Because of the varied activities of the Department it is impossible to forecast with absolute certainty the number of new machines that may be needed. Furthermore, this limitation restricts the making of replacements as exigencies arise.

The language of the paragraph has also been amended as follows:

THE HISTORY OF THE UNITED STATES OF AMERICA

BY JAMES M. SMITH

NEW YORK

The history of the United States of America is a story of growth and development. It begins with the first settlers who came to the continent in search of a new home. These settlers found a land of vast resources and opportunities, but they also found a land that was already inhabited by a rich and diverse people. The story of the United States is a story of the struggle to create a new society, a society that would be based on the principles of liberty and justice for all.

The story of the United States is a story of the struggle to create a new society, a society that would be based on the principles of liberty and justice for all. It is a story of the struggle to overcome the challenges of a new world, a world that was full of opportunity but also full of danger. The story of the United States is a story of the struggle to create a new society, a society that would be based on the principles of liberty and justice for all.

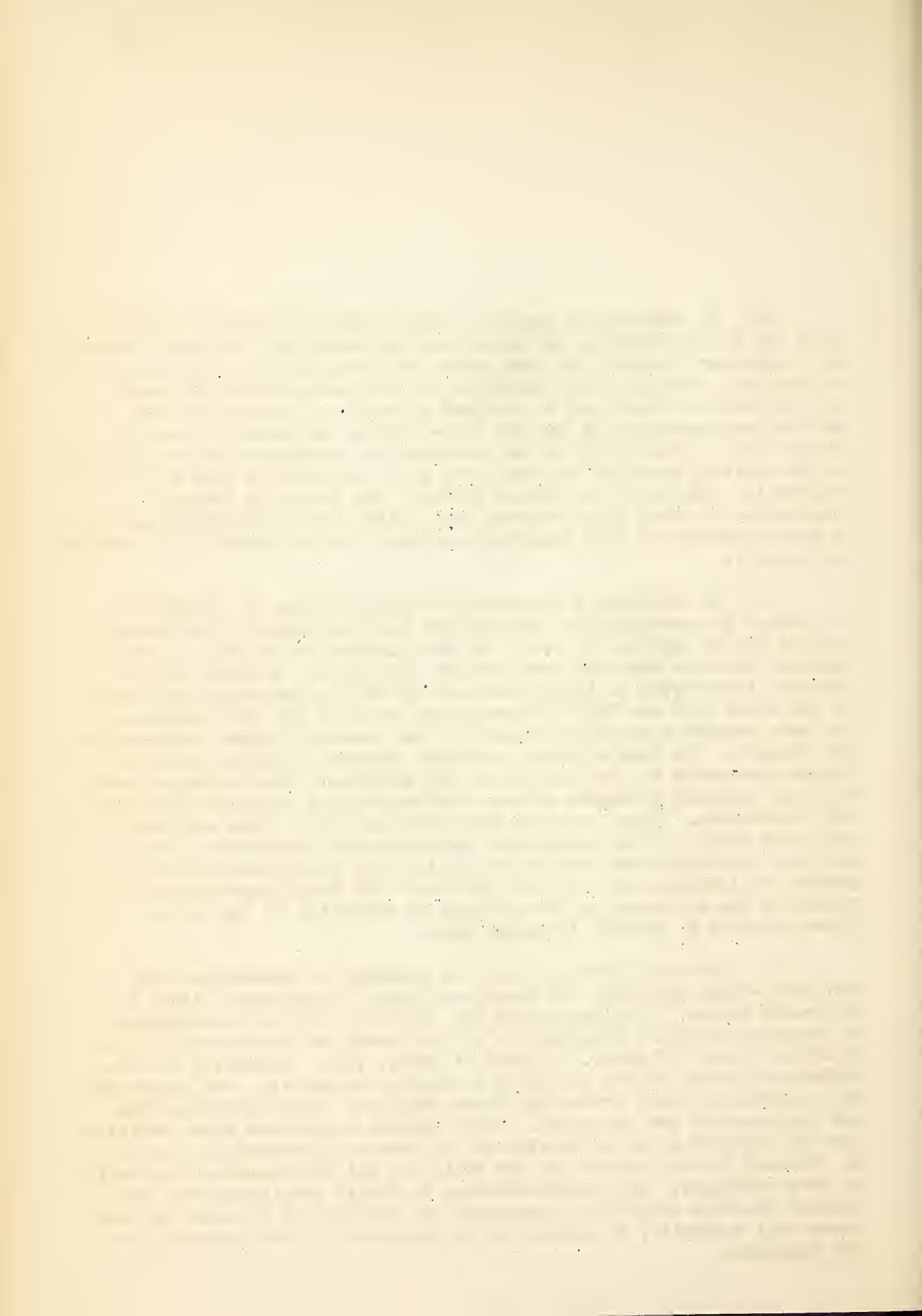
The story of the United States is a story of the struggle to create a new society, a society that would be based on the principles of liberty and justice for all. It is a story of the struggle to overcome the challenges of a new world, a world that was full of opportunity but also full of danger. The story of the United States is a story of the struggle to create a new society, a society that would be based on the principles of liberty and justice for all.

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(a) By inserting a proviso to the effect that railroad speeders shall not be construed as passenger-carrying vehicles. Railroad speeders are a necessary part of the fire patrol and fire-fighting equipment on the national forests. They obviously can be operated only on tracks or railroads and their use is confined strictly to fire patrol duty and the transportation of men and fire-fighting equipment in case of forest fires. They would not be construed as passenger-carrying vehicles in the ordinary sense of the word, but have been held as such by the Comptroller General of the United States. The change in language is recommended in order to circumvent this ruling and permit the Department to make purchases of this essential equipment as the needs of the service may require.

(b) By inserting a proviso authorizing the use of \$25,000 of the moneys appropriated for carrying out the provisions of the Federal Highway Act of November 9, 1921, for the purchase of vehicles to replace worn-out vehicles obtained from the War Department. A number of the vehicles transferred to this Department by the War Department have been in use since 1918 and 1919 following hard usage in the War Department, and have reached a condition which will not warrant further expenditures for repairs. The best of these vehicles, however, could be traded in to good advantage in the purchase of new machines. The extensive road building projects in course of construction require intensive inspection and supervision. These projects are scattered over a wide territory and their effective and economical inspection and supervision demands adequate transportation facilities. Unless the Department can make gradual replacements it will soon be faced with the alternative of replacing the equipment in its entirety or resorting to the use of hired vehicles at greatly increased cost.

(c) By adding provision for the exchange of motor-propelled and horse-drawn vehicles, and boats, and parts, accessories, tires and equipment thereof. The Department now has authority for the exchange of passenger-carrying vehicles, as well as parts and accessories of all motor-equipment (39 Stat., 1166 and 41 Stat., 723). Authority for the exchange of motor trucks and boats is equally desirable. The Department has a number of motor trucks and boats that have become unserviceable and replacements are essential. Under present conditions these vehicles must be disposed of at a fraction of the turn-in allowance that could be obtained in the purchase of new equipment had the Department authority to make exchanges. This recommendation is wholly consistent with the general practice prevailing throughout the service, as a result of Congressional authority, of exchanging old equipment in part payment for new equipment.



Eradication of foot-and-mouth and other contagious diseases of animals.

Actual decrease of \$1,000.

Eradication of the Pink Bollworm of Cotton. Apparent decrease

\$29,490; actual decrease \$32,130, as follows:

(a) Increase of \$3,500 as follows:

- (1) \$240 under Classification Act.
- (2) \$2,400 to provide for increase of compensation (\$240 bonus).
- (3) \$860 in item for cooperation with Mexico.

(b) Actual decrease of \$32,990 in item for eradication. \$30,000 of this amount was recommended by the Department. This appropriation has always been regarded as an emergency one and expenditures thereunder are confined to the imperative needs of the work. It is obviously impossible to forecast with any degree of accuracy the exact needs for any particular year, as expenditures are more or less governed by new outbreaks of pink bollworm which must be adequately and promptly met. Practically every year it has been possible to turn a portion of the appropriation back into the Treasury. Such a circumstance, it is thought, fully warrants the reduction recommended. Should a new emergency arise which cannot be met with the reduced appropriation, additional funds will be asked in a supplemental estimate.

Eradication of Parlatoria Date Scale. Increase of \$6,440, for eradication of the Parlatoria date scale.

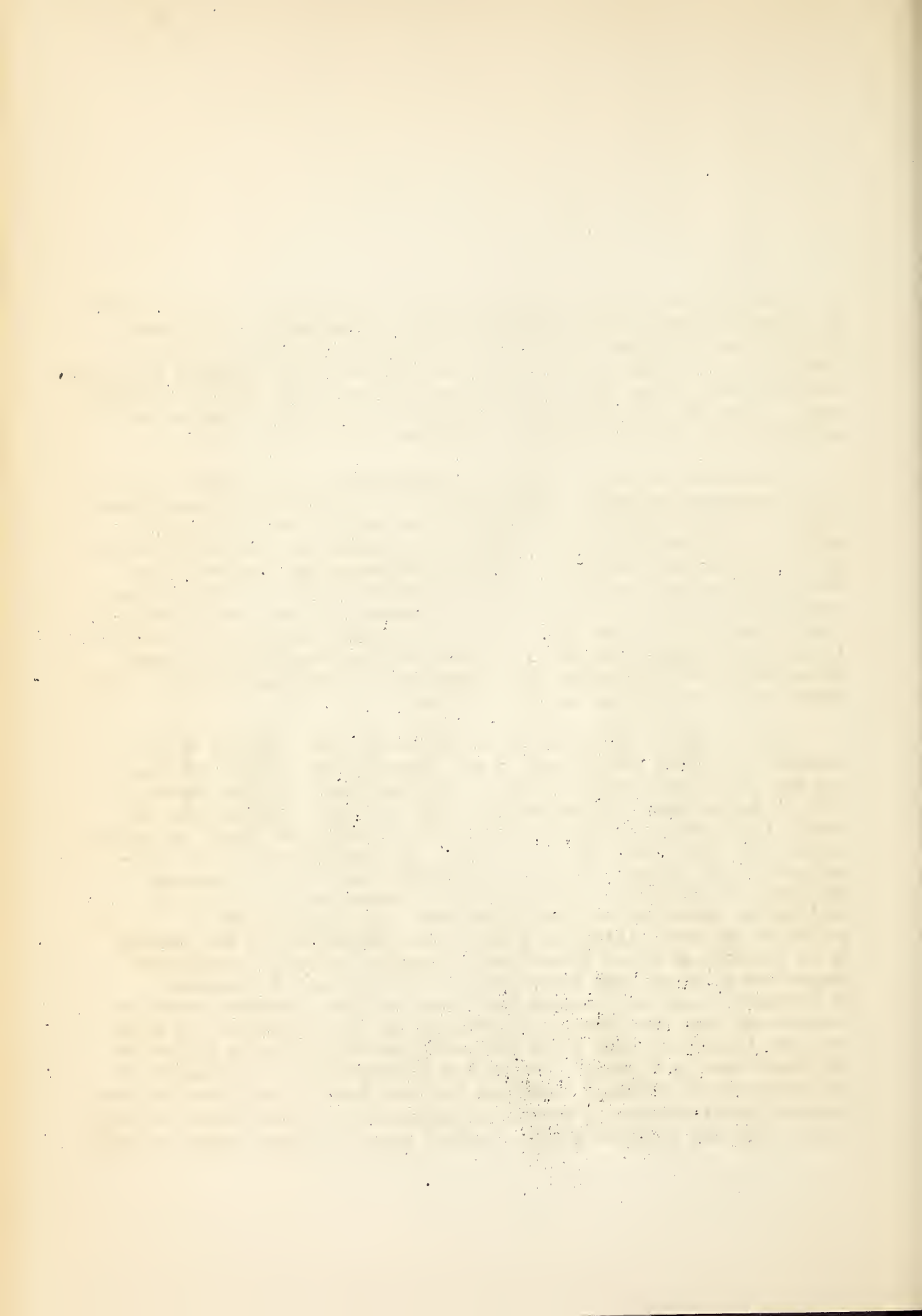
Date culture in the hot, irrigated districts of the Southwest is one of the most promising new agricultural industries of the country. Dates of a high quality are being produced and, through methods of handling which have been developed, reach the consumer in an absolutely clean condition. Investments in the date industry in the Coachella Valley of California alone have grown from a few thousand a decade ago to more than a million dollars. The industry is developing just as fast as offshoots can be secured for planting. In the near future investments in the date industry will undoubtedly amount to ten millions of dollars, with the possibility of the industry within twenty-five years becoming one of the six leading fruit industries of the Southwest, representing an investment of from twenty-five to fifty millions of dollars.



Date culture on a commercial scale in this country, however, will be possible only if the Parlatoria scale is eradicated. Very good progress has been made in the work of eradication, considering the fact that practically every one of the forty or fifty thousand offshoots imported from abroad was infested with this scale insect upon arrival, and in spite of the most drastic treatments more than a hundred date orchards in California, Arizona, and Texas have become infested.

On account of the slow rate of reproduction of the date palm, it is necessary to import large numbers of the offshoots of any given variety of date in order to establish that variety on a commercial scale in this country, but the recent introductions, made in response to the most urgent demands of promising date-growing regions, have brought a new peril in the shape of Parlatoria scale. To forbid the introduction would have delayed for a quarter of a century the utilization of some of the best date land in the United States, but the bringing in of the offshoots has definitely renewed the danger of Parlatoria infestation and will render very necessary the continuance of the eradication work for a number of years to come.

The demand for varieties of dates suitable for culture in the Imperial and other hot valleys of the Southwest not suited for growing the Deglet Noor variety, led to the importation by the Department of Agriculture, in cooperation with practical date growers, of nearly ten thousand offshoots, mostly of the Saidy and Hayany varieties, during the years 1920, 1921, and 1922. In accordance with the regulations of the Federal Horticultural Board, all of these imported offshoots are planted in five quarantine nurseries in Arizona and California, where the original palms must stay in place for a period of at least fifteen or twenty years, depending on the variety. It is a matter of vital importance, therefore, to have a continued inspection of these five nurseries, and of the tens of thousands of offshoots that will be sold from these original imported palms to farmers all over the date-growing regions of the Southwest. To carry out this inspection work it is absolutely essential that a larger inspection force be employed, for if the offshoots are not followed up and inspected at frequent intervals the good done by the intensive campaign of eradication will be undone because of new infestations springing up from the imported palms. Many of these imported palms are known



to be infested with the *Parlatoria* scale, which cannot be killed until the trees begin to make rapid growth which will bring the scales out into sight and at the same time make the trees strong enough to withstand the drastic fumigation or torching used to kill the scales.

The inspection work becomes increasingly difficult as the campaign of eradication progresses. It is no exaggeration to say that the real test of the *Parlatoria* eradication campaign will occur during the years when the last few scales are found. Unless the campaign is kept at full force, the few scattered infestations will be overlooked and, if neglected, will reinfest very rapidly the orchards now nearly free from scale; undoing the work of years, and finally sealing the doom of this promising new industry.

Mileage rates for motor vehicles. The word "operating" is substituted for the word "traveling." As the provision now reads the Comptroller General of the United States has held that the mileage rates of seven cents a mile for an automobile and three cents a mile for a motorcycle are in lieu of all "traveling" expenses and employees operating their personally-owned vehicles in official work on a mileage basis cannot be reimbursed in addition for such items of traveling expenses as ferry and storage charges, towage in case of breakdowns, and road tolls. The application of this rule has created a disposition on the part of employees to discontinue using their vehicles in the transaction of official business. Such a circumstance would be extremely detrimental to the efficient conduct of the Department's field work, as through the use of employees' personally-owned vehicles in official work, the Department has placed at its disposal at all times a large number of vehicles at rates of hire which represent only a fraction of prevailing commercial rates.

The change in language recommended will circumvent the ruling of the Comptroller General and make provision for the commutation of "operating" expenses to a mileage basis. This is what the Department sought when the legislation was originally recommended, and, unquestionably, what the Congress intended in enacting it.

Olympic National Forest. The Olympic National forest is a part of District 6 of the Forest Service, and the funds provided by this item are administered by that District. Consequently it is believed to be in the interest of good administration to consolidate this appropriation with that provided for District 6 under general expenses, Forest Service. However, only \$13,000 is transferred to the Forest Service, effecting a decrease of \$12,000 by the Department.

Protection of the so-called Oregon and California Railroad Lands and Coos Bay Wagon Road Lands. This item is transferred to and made a part of the item for fighting and preventing forest fires under general expenses, Forest Service.

Center Market Operation and Management. Apparent decrease \$11,000; actual decrease \$13,900 as follows:

(a) Increase of \$2,900 as follows:

(1) \$500 under Classification Act.

(2) \$2,400 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$13,900.

The language of the item has been amended to authorize the payment of claims for the loss of goods while in storage in Center Market. The Department has authority to pay claims for damage to goods, and it is essential that authority for the payment of claims be extended to goods that may become lost.

Enforcement of the Packers and Stockyards Act. Apparent increase \$57,040; actual increase \$39,500, as follows:

(a) \$3,540 under Classification Act.

(b) \$14,000 to provide for increase of compensation (\$240 bonus).



(c) \$39,500 for enforcement of the Packers and Stockyards Act. It is impossible to estimate satisfactorily a year in advance the funds that will be required for the enforcement of the Packers and Stockyards Act. For example, the possibility had not presented itself at the time of the presentation of the estimates for the current fiscal year that the Department would be faced with the formal proceedings relating to Armour & Company and Morris & Company, involving necessary expenditures which could not be foreseen. It is highly necessary that some provision for contingencies be made in the appropriation for 1925, so as to have funds available for meeting unanticipated developments, and for this purpose it is proposed to set aside \$15,000.

The remainder of the increase requested (\$24,500) is needed to enlarge the work already begun on the valuation of stockyards properties and the determination of stockyards rates and charges. It has been found as a practical matter that this activity will involve a considerable expenditure of funds if carried on at all expeditiously. Unless the work is vigorously pushed the fundamental readjustments of rates and charges of stockyards companies will be materially delayed.

The stockyards work has been started with such funds as are now available with the expectation of building it up to a point where it will be a real factor in determining rates and charges. The present appropriation, however, will not permit of the expedition and thoroughness that is essential. For example, it has consumed several months and many thousands of dollars to carry on the proceedings involving the valuation and determination of rates for the Chicago Union Stockyards with the limited force available for the purpose. Greater expedition which is necessary to dispose of many such matters will require much larger current expenditures.

Enforcement of the Grain Futures Act. Apparent increase \$860,
as follows:

(a) \$140 under Classification Act.

(b) \$720 to provide for increase of compensation (\$240 bonus).

The language of the paragraph has been amended by omitting for the present the proviso which will not be necessary when the salary Classification Act goes into effect.

Collection of Seed Grain Loans. Apparent decrease \$685; actual decrease \$965, as follows:

(a) Increase of \$280 as follows:

- (1) \$40 under Classification Act.
- (2) \$240 to provide for increase of compensation (\$240 bonus).

(b) Actual decrease of \$965.

It will be necessary to extend some of the loans still outstanding under the seed grain loan provisions of the Act of March 3, 1921, and the Seed Grain Loan Act of March 20, 1922, as it will not be possible to collect all of them out of the proceeds of the 1923 crop. The current appropriation of \$20,000 is insufficient for full collection activities this year, and a supplemental appropriation is being asked to continue the collection activities without interruption. Even though additional funds are obtained for collection expenses during the present year a considerable number of accounts will still be outstanding on June 30, 1924. In several of the counties where the largest amounts remain uncollected, crops were poor in 1923 principally because of grasshopper damage, and generally throughout the spring wheat region financial conditions are bad, so that collections from the 1923 crop have been rather smaller than was anticipated. Renewal mortgages covering the 1924 crops are now being taken so that the Government will have tangible claims on which to base efforts for collection next year. An appropriation of \$19,315 for this work during the fiscal year 1925 should be returned several times over in collections.

Maximum salaries. This paragraph is omitted as salary rates during the fiscal year 1925 will be fixed in accordance with the provisions of the Classification Act by the Personnel Classification Board.

International Farm Congress. This item is omitted as the International Farm Congress was held during 1923.

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PHYSICS DEPARTMENT

RESEARCH REPORT

ON THE THEORY OF THE

ATOMIC SPECTRA

By J. J. THOMSON

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International Seed Testing Congress. This is a new item but does not carry an appropriation. It merely authorizes the President to appoint delegates to represent the United States at the International Seed Testing Congress to be held at London and Cambridge, England, July 7 to 12, 1924, and provides for the payment of the traveling expenses of delegates from the applicable appropriations of the Department. The delegates to this Congress will include officials of this Department and representatives of some of the leading seed trade organizations of the country. The Department will, however, only bear the expenses of its officials. The first session of the Congress was held at Copenhagen in 1921, but this Department was not represented on account of the lack of Congressional authority. (See also item for seed testing laboratory under Bureau of Plant Industry.)

Increase of Compensation:

The item for Increase of Compensation, carrying an appropriation of \$3,304,800, is omitted in the Estimates for the fiscal year 1925. The salaries of employees in the departmental service in the City of Washington have been classified in accordance with the provisions of the Classification Act of March 4, 1923, and the additional amounts required to carry the classification into effect during the fiscal year 1925 have been estimated for under each item of appropriation.

Provision has not, however, been made for the increase of compensation at the rate of \$240 per annum for employees in the field service.



Forest Roads and Trails.

Increase of \$2,000,000.

The appropriation and authorization recommended are necessary to carry on the road and trail construction work in the National Forests on a continuing basis and on the scale authorized by Congress for this work. These roads and trails are of primary importance to the protection, administration and development of the National Forests, consisting of a total area of over 156,000,000 acres, and to the States, counties and communities in which these nontaxable Federal properties are situated. Their construction at the earliest practicable date is justified on the grounds of good business management of these forests and good faith and fair dealing with the local authorities. The appropriation of \$5,000,000 which is requested amounts to only slightly more than three cents per acre for the total area withdrawn from taxation and placed under Federal control for improvement and public use.

The Department has estimated the mileage of roads and trails now needed or that will be needed within ten years in order to provide a proper transportation system for the National Forests and has been studying the condition of existing roads to determine to what extent they are of the standard required to serve the traffic and property properly with a view to estimating the expenditure that will be required to provide an adequate system. Though this investigation is not yet completed the results of the study to date are as follows:

System	Mileage in required system	Length of existing roads	Percentage of required system that is now of satisfactory standard	Length to be improved or new roads built	Required expenditure for better- ments and new con- struction
Forest Highways	13,507	11,927	23	10,334	\$119,846,912
Forest Develop. Rds.	21,823	15,502	28	15,748	47,345,054
Forest Develop. Trails	36,279	-	-	-	10,700,347
Totals	35,330	27,429	26	26,082	177,892,313
	Roads	(Roads)	(Roads)	(Roads)	
	36,279				
	Trails				

The above shows that according to the present estimates 26 per cent of the road system is now done and that a further expenditure of \$177,892,313 is needed to complete an adequate road and trail system. To finish this system within a period of ten years, with no provision for maintenance, an average annual expenditure of approximately \$17,800,000 will be required from Federal appropriations in cooperation with States, counties and other agencies. Postponing the completion of the system to the end of a twenty-five year period, the average annual expenditure would be about \$7,100,000.

The first part of the paper is devoted to a discussion of the general principles of the theory of the structure of the atom. It is shown that the structure of the atom is determined by the laws of quantum mechanics, and that the structure of the atom is determined by the laws of quantum mechanics. The second part of the paper is devoted to a discussion of the general principles of the theory of the structure of the atom. It is shown that the structure of the atom is determined by the laws of quantum mechanics, and that the structure of the atom is determined by the laws of quantum mechanics.

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Paragraph 2 of Section 4 of the Act making appropriations for the Post Office Department for the fiscal year ending June 30, 1923, approved June 19, 1922, authorized the appropriation of \$6,500,000 for the fiscal year ending June 30, 1924, and \$6,500,000 for the fiscal year ending June 30, 1925, for the construction of forest roads and trails in accordance with the provisions of Section 23 of the Federal Highway Act, approved November 9, 1921.

Of the \$6,500,000 authorized to be appropriated for the fiscal year ending June 30, 1923, \$3,000,000 was appropriated by the Act making appropriations for the Department of Agriculture for the fiscal year 1924.

At the close of the fiscal year 1923, there remained an unexpended balance of the funds provided by the Federal Highway Act, of \$8,768,268, which became available for the fiscal year 1924. The additional \$3,000,000 appropriated by the Agricultural Act for the fiscal year 1924 increased the amount available for the fiscal year 1924 to \$11,768,268.

It is estimated that during the fiscal year 1924, expenditures on account of contract projects under construction, day labor work under construction, maintenance of completed projects and administration and overhead will amount to \$9,355,495. Programmed and other approved projects not now under construction amount to \$2,105,954, making a total charge against the \$11,768,268 available for the fiscal year 1924 of \$11,461,449. On this basis, there will remain at the close of the fiscal year 1924 to become available for the fiscal year 1925 an undisbursed balance of approximately \$300,000.

The recommendations for the fiscal year 1925 contemplate an appropriation of \$5,000,000 and authorize the Secretary of Agriculture to incur obligations by contract, approval of projects or otherwise to the extent of an additional \$5,000,000. From the appropriation now recommended under the authorization of June 19, 1922, and from the balance in the amount previously appropriated, there will be available for expenditure during the fiscal year 1925 a total of about \$5,300,000. This represents a reduction of approximately \$6,000,000 in the estimated Federal expenditures from the fiscal year 1924. The new appropriation of \$5,000,000 exceeds by \$2,000,000, the amount appropriated for the fiscal year 1924. But of this \$5,000,000 total, \$3,500,000 is the balance in the authorized appropriation for the fiscal year 1924 and against which obligations have been incurred as authorized by Congress. In other words, the appropriation previously made and that now recommended from the authorizations given in the Post Office Department Act of June 19, 1922, will total \$8,000,000. There will remain \$5,000,000 authorized for the fiscal year 1925, for which appropriation is not now recommended, but it is urgently desired that the Secretary of Agriculture be authorized to prorate this amount for work in the National Forest States and to enter into contracts, approve projects and otherwise incur obligations in order that the work may proceed upon a practical basis of continuity.



Cooperative construction of the federal aid highway system. Decrease
of \$15,800,000.

(1) The amount required under this fund to insure a Treasury balance July 1, 1925, that will equal the obligation of the Federal Government on account of road work actually under construction in the several States for which the Federal Government has assumed contractual obligations in accordance with the Act making appropriations for the Post Office Department for the fiscal year 1923, approved June 19, 1922, and the Act making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1924, approved February 26, 1923, is \$74,000,000.

(2) Paragraph 1 of Section 4 of the Act making appropriations for the Post Office Department for the fiscal year ending June 30, 1923, authorized the appropriation of \$50,000,000 for the fiscal year ending June 30, 1923, \$65,000,000 for the fiscal year ending June 30, 1924, and \$75,000,000 for the fiscal year ending June 30, 1925, for Federal aid to roads, and also authorized the Secretary of Agriculture to apportion the \$50,000,000 therein authorized to be appropriated for the fiscal year ending June 30, 1923, among the several States as provided in Section 21 of the Federal Highway Act approved November 9, 1921, with the provision that projects approved under his apportionment shall be deemed contractual obligations of the Federal Government for the payment of its proportional contribution thereto. The Act making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1924, and for other purposes, approved February 26, 1923, authorized the Secretary of Agriculture to apportion among the several States, as provided in Section 21 of the Federal Highway Act, approved November 9, 1921, the \$65,000,000 authorized to be appropriated for the fiscal year ending June 30, 1924, by paragraph 1 of Section 4 of the Act approved June 19, 1922, with the provision that projects approved under his apportionment shall be deemed contractual obligations of the Federal Government for the payment of its proportional contribution thereto, and the Federal Highway Act, approved November 9, 1921, authorized the Secretary of Agriculture to apportion in accordance with Section 21, the funds made available therein. Apportionments have been made to the full extent of these authorizations.

(3) Of the \$50,000,000 authorized to be appropriated for the fiscal year 1923, \$25,000,000 was appropriated by the Deficiency Act of January 22, 1923, and of the \$65,000,000 authorized to be appropriated for the fiscal year 1924, \$29,300,000 was appropriated by the Act making appropriations for the Department of Agriculture for the fiscal year 1924.

(4) It is estimated that during the fiscal year 1924 the withdrawals from the Treasury will be \$85,000,000 on account of completed work, and for the fiscal year 1925, \$90,000,000. In addition there will be outstanding obligations on account of work actually under construction but not completed in excess of \$60,000,000, a total in Federal Government obligations of approximately \$235,000,000. The total appropriation available to meet these obligations consists of the un-



expended balances on July 1, 1923 of sums previously appropriated amounting to approximately \$161,000,000. Therefore, to meet the estimated obligations an appropriation of \$74,000,000 would be required.

(5) Considering the situation strictly from the standpoint of cash withdrawals from the Treasury it is estimated that during the fiscal year 1924, the cash withdrawals on account of completed construction work will amount to \$85,000,000, and that during the fiscal year 1925, the cash withdrawals will amount to \$90,000,000, making a total estimated cash withdrawal from the Treasury of \$175,000,000 by July 1, 1925. The fund available to meet this withdrawal consists, as stated above, of unexpended balances of appropriations previously made amounting to \$161,000,000.

(6) In order to keep within the maximum amount allocated to this Department for 1925, both for the Department as a whole and for road construction, by the Bureau of the Budget, an estimate of \$13,500,000 is being submitted to meet estimated cash withdrawals.

(7) In addition to the appropriation of \$13,500,000 submitted from the 1925 authorization, there is included a recommendation for the same legal authorization with reference to the \$75,000,000 authorized to be appropriated for the fiscal year 1925 as was contained in the Agricultural Act of February 26, 1923, so that the program for road construction will proceed without interruption.

If the authorization recommended is granted and no material change occurs to alter the forecasted rate of road construction in the several States, the \$13,500,000 recommended should be sufficient, together with balances on hand, to meet the cash withdrawals during 1925. In the event additional funds are required it would, of course, be necessary for the Department to present them for consideration in connection with deficiency acts for 1925. The estimate of \$13,500,000 is based on the understanding by the Department of Agriculture that the established fiscal policy of the Government in this matter is to recommend appropriations on the basis of estimated cash withdrawals rather than amounts authorized by legislative acts.

